Supporting Information

Synthesis and Evaluation of Novel Non-Covalent Binding Quinazo-line Glycoside Derivatives Targeting the L858R and T790M variants of EGFR

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Molecular modeling studies (23, 27 and 33)

Docking simulations were carried out by means of the SYBYL-X 2.0 software and using the crystal structure of EGFR kinase (PDB code 4i23). All the ligand molecular were drawn using the standard parameters of SYBYL-X, then their geometric conformations were energy minimized employing the Tripos force field for 1000 steps and Gasteiger-Huckel charges were calculated. Protein receptor was prepared by removing the ligand and all water molecules. The active-site radius was set equal to 5 Å. The compound 23, 27 and 33 was docked into the EGFR model using SYBYL-X 2.0 with the standard default settings.

Molecular modeling studies (HKI-272 and lapatinib)

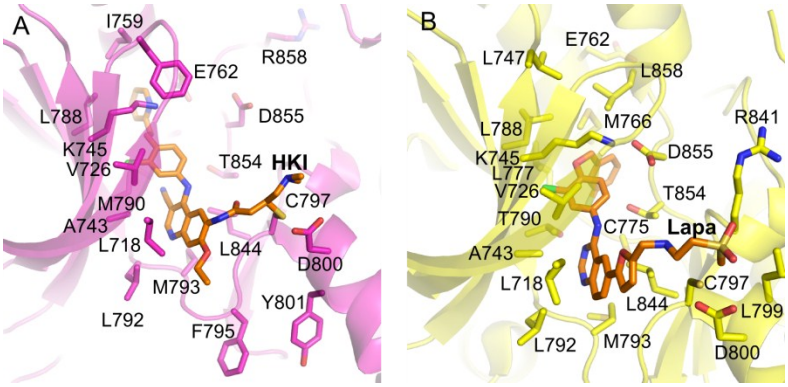


Figure S1. The binding mode of HKI and Lapatinib to the EGFR.

Initial structure preparation.

Compound 33 was sketched and minimized using 6000 steps of conjugated minimization in SYBYL-X 2.0 (Tripos Associates, St. Louis, MO, USA). [1] The crystal structure of the EGFR mutant (EGFR T790M/L858R, PDB code: 4LL0) bound with HKI (HKI-272) was used for molecular docking. After deletion of the HKI and the water, and compound 33 was docked into the binding site of the EGFR mutant using Surflex-Dock of SYBYL-X 2.0 (Tripos Associates, St. Louis, MO, USA). The conformation with minimum energy was selected for molecular dynamics simulations.

Molecular dynamics simulations.

Molecular dynamics simulations were performed on the complexes between EGFR mutant and HKI using Amber 12 package.[2] FF03.r1 and GAFF force field were employed for the protein and the compounds, respectively.[3,4] The partial charge of the compound 33 was calculated using Antechamber. Each protein-compound complex was solvated into a 10 Å thick octahedral TIP3P water box and neutralized with Na^+. Prior to MD, each system was minimized using 3000 steps of steepest descent minimization followed by 3000 steps of conjugate gradient minimization. After minimization, each of the systems was equilibrated in NVT by increasing the temperature from 0 to 300 K with the solute restrained with a harmonic force for 50 ps and then they were further equilibrated for another 50 ps at 1atm in NPT. In the production phase, the restraints were removed and 50 ns MD was performed. The non-bonded cutoff was set to 12 Å and SHAKE was applied for all the bonds involving hydrogen atoms.[5] The particle mesh Ewald (PME) method was employed to calculate the long-range electrostatic interactions with a time step of 2 fs. [6]

Kinase and Cellular Inhibitory Activities

EGFR activity assays were performed using an ELISA assay according to the reported protocols.[7] The compounds were incubated with the kinase reaction mixture

for 1.0 h before measurement. The data are mean values from 3 independent experiments. Poly (Glu, Tyr)$_{4:1}$(Sigma, St. Louis, MO) (20 μg/mL) was precoated in 96-well ELISA plates as the substrate. The active kinases were incubated with indicated compounds in 1×reaction buffer (50 mmol/L HEPES pH 7.4, 20 mmol/L $MgCl_2$, 0.1 mmol/L $MnCl_2$, 0.2 mmol/L Na_3VO_4, 1mmol/L DTT) containing 5μmol/L ATP at 37 °C for 1 h. After incubation, the wells was washed with PBS, and then incubated with anti-phosphotyrosine (PY99) antibody (Santa Cruz, CA) and horseradish peroxidase (HRP)–conjugated secondary antibody in sequence. The wells were visualized using o-phenylenediamine (OPD) and read using a multiwell spectrophotometer (VERSAmax™, Molecular Devices, Sunnyvale, CA, USA) at 492 nm.

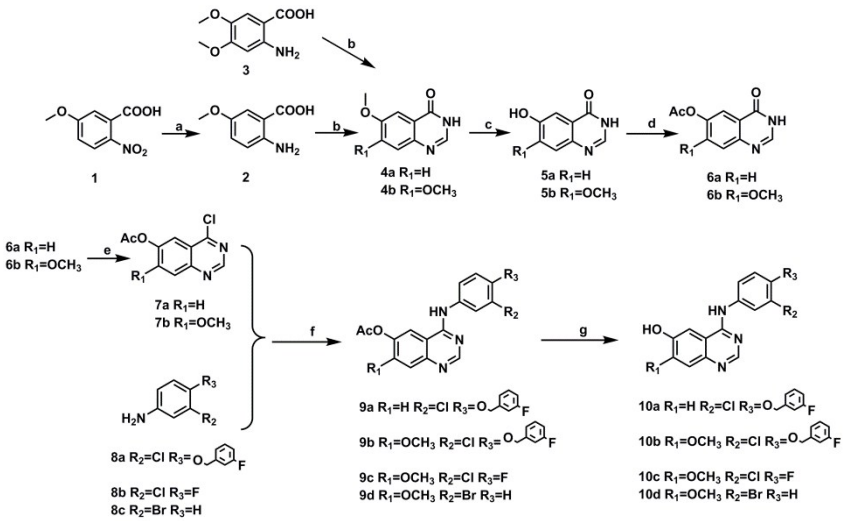
All the compounds **20** to **43** were evaluated for cytotoxic properties in EGFR overexpressing skin epidermoid carcinoma cell line (A431) with gefitinib as a positive control. Inhibition of cell proliferation was measured using SRB assay. [8]

Chemical synthesis and analytical data

Reagents and methods

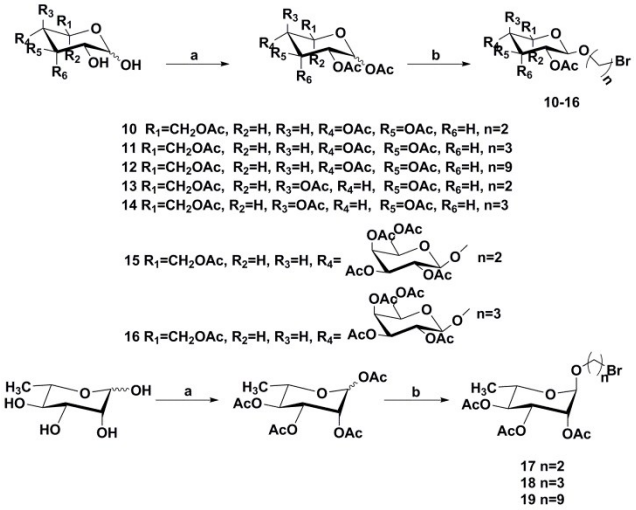
All reagents used in the experiments were obtained from commercial sources and purified in a conventional manner. Thin layer chromatography (TLC) was performed on Merck Silica Gel 60 F_{254} plates. Flash column chromatography was carried out on silica gel (200 – 300 mesh, Qingdao, China). ^{1}H NMR and ^{13}C NMR spectra were taken on a Jnm-Ecp-600 spectrometer (JEOL, Ltd. Tokyo, Japan) with tetramethylsilane (Me_4Si) as the internal standard. Mass spectra were recorded on a Q-TOF Global mass spectrometer (Waters Co., Milford, MA, USA).

Scheme S1. Synthesis of 10a to 10d.



Reagents and conditions: (a) H_2, Pd/C, MeOH; (b) $CH(OC_2H_5)_3$, MeOH, 120℃， 3h; (c) L-methionine, $MeSO_3H$, 130℃, N_2, 5 h; (d) Acetic anhydride/Pyridine, 4h, 100℃; (e) $POCl_3$, DIPEA, 100℃, N_2, 30 min; (f) i-PrOH, 90℃, 4 h; (g) NH_4OH, CH_3OH, 10 h, rt.

Scheme S2. Synthesis of 10 to 19.



Reagents and conditions: (a) Acetic anhydride, Pyridine, 0℃, 0.5h, rt, 24h; (b) 2-bromoethanol, 3-bromo-1-propanol or 9-bromononan-1-ol/BF_3, anhydrous CH_2Cl_2.

The key intermediates **10a** to **10d** were synthesized from 2-nitro-5-methoxybenzoic acid (**1**) or 2-amino-4,5-dimethoxybenzoic acid (**3**), as previously reported (Scheme 1). Briefly, the reduction of compound **1** with Pd/C in H2 atmosphere yielded 2-amino-5-methoxybenzoic acid (**2**) which was followed by cyclization to produce the crucial basic skeleton 6-methoxyquinazolin-4(3H)-one (**4a**) in a good yield.[9] The synthesis of compound **4b** started from 2-amino-4,5-dimethoxybenzoic acid (**3**) which is also through a process of cyclization and that is similar to the cyclization of compound **2**. Demethylation of 6-methoxy group of compound **4a** and **4b** was done using methanesulphonic acid and L-methionine to get demethylated product **5a** and **5b**, followed by O-protection using acetic anhydride to get compound **6a** and **6b**, which were then treated with thionyl chloride to get chloro derivative **7a** and **7b** and then coupled with compound **8a-8c** at 80℃ to get the intermediates **9a-9d**. Compound **9a-9d** was then deacetylated using aq. ammonia to get the important intermediate **10a-10d**.[10, 11]

The glycosyl donors **10** to **19** were synthesized by coupling their full acetylated saccharide with the different bromohydrin, as described in Scheme 2. For instrance, the glycosyl donors **10** was prepared by reacting the 2,3,4,6-tetraactetyl-D-Glucose, which could be synthesized by direct acetylation with glucose, and 2-bromoethanol with ethyl ether boron fluoride as catalyst in anhydrous dichloromethane as previously described. Similarly the other glycosyl

donors **11** to **19** were prepared by reacting different full acetylated saccharide and 2-bromoethanol, 3-bromo-1-propanol or 9-bromononan-1-ol.[12]

4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)quinazolin-6-ol (10a). m.p. 152-155℃; ^{1}H-NMR (DMSO-d_6, 600 MHz): δ 9.89 (s, 1H, NH), 8.62 (s, 1H, OH), 8.41 (s, 1H, ArH), 8.09 (s, 1H, ArH), 7.84-7.83 (d, *J* = 1.6 Hz, ArH, 1H), 7.78-7.77 (d, *J* = 6.0 Hz, 1H, ArH), 7.69-7.68 (d, *J* = 7.8 Hz, 1H, ArH), 7.47-7.27 (m, 5H, ArH), 7.19 (s, 1H, ArH), 5.26 (s, 2H). ^{13}C NMR (DMSO-d_6, 150 MHz): δ 158.0, 154.9, 150.2, 148.5, 140.3, 133.7, 131.1, 129.7, 129.0, 124.5, 123.9, 122.6, 121.5, 115.9, 115.4, 115.3, 115.2, 114.8, 114.7, 114.5, 69.9; ESI-MS 395.9 $(M + H)^+$.

4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)-7-methoxyquinazolin-6-ol (10b). m.p. 233-236 °C; ^{1}H NMR (DMSO-d_6, 600 MHz): δ 9.71 (br, s, 1H, ArOH), 9.43 (s, 1H, NH), 8.44 (s, 1H, ArH), 8.07 (s, 1H, ArH), 7.81 (s, 1H, ArH), 7.74 (s, 1H, ArH), 7.47 (s, 1H, ArH), 7.33-7.20 (m, 5H, ArH), 5.25 (s, 2H), 3.97 (s, 3H, -OMe); ^{13}C NMR (DMSO-d_6, 150 MHz): δ 156.6, 154.4, 152.6, 149.6, 147.1, 146.5, 140.3, 134.5, 131.1, 123.9, 122.2, 121.5, 115.3, 115.2, 114.9, 114.7, 114.5, 110.0, 107.6, 106.0, 69.9, 56.5; ESI-MS 425.9 $(M + H)^+$; HRMS (ESI): calcd for $C_{22}H_{18}N_3O_3FCl^+$, 426.1021; found 426.1020.

4-(3-chloro-4-fluorophenylamino)-7-methoxyquinazolin-6-ol (10c). m.p. 284-286 °C; ^{1}H NMR (DMSO-d_6, 600 MHz): δ 9.75 (s, 1H, ArOH), 9.61 (s, 1H, ArH), 8.49 (s, 1H, ArH), 8.25-8.24 (dd, *J* = 6.9, 2.3 Hz, 1H, ArH), 7.86 (s, 1H, ArH), 7.43-7.40 (t, *J* = 9.2 Hz, 2H), 7.23 (s, 1H, ArH), 3.99 (s, 3H, -OMe); ^{13}C NMR (DMSO-d_6, 150 MHz): δ 156.5, 154.5, 152.6, 152.4, 147.3, 146.6, 137.7, 123.4, 123.3, 119.2, 116.9, 110.1, 107.6, 106.0, 56.5; ESI-MS 320.1 $(M + H)^+$.

4-(3-chloro-4-bromophenylamino)-7-methoxyquinazolin-6-ol (10d). m.p. 217-220 °C; ^{1}H NMR (DMSO-d_6, 600 MHz): δ 9.72 (s, 1H, ArOH), 9.56 (s, 1H, ArH), 8.51 (s, 1H, ArH), 8.27 (s, 1H, ArH), 7.93-7.92 (d, *J* = 8.2 Hz, 1H, ArH), 7.87 (s, 1H), 7.40 (s, 1H, ArH), 7.32-7.31 (d, *J* = 2.3 Hz, 1H), 7.25-7.23 (dd, *J* = 12.1, 4.8 Hz, 1H, ArH), 3.97 (s, 3H, -OMe); ^{13}C NMR (DMSO-d_6, 150 MHz): δ 156.5, 154.6, 152.4, 147.4, 146.7, 142.2, 130.8, 125.7, 124.1, 121.7, 120.7, 110.3, 107.6, 106.1, 56.5; ESI-MS 346.1 $(M + H)^+$.

2-Bromoethyl 2,3,4,6-Tetra-O-acetyl-β-D-glucopyranoside (10)

$BF_3 \cdot Et_2O$ (15 mL) was added dropwise to a solution of alpha-D-Glucose pentaacetate (12.0 g, 30.74 mmol) and 2-bromoethanol (2.7 mL ,1.2 equiv.) in dry DCM (50 mL) at 0°C under N_2 atmosphere. After 1.5 h, the reaction mixture was warmed to room temperature and stirred for a further 20h. After completion, the reaction mixture was poured into ice water (50 mL) and extracted with DCM (3 × 40 mL). The organic extracts were combined, washed with water (15 mL), dried ($MgSO_4$), filtered, and the solvent was removed under reduced pressure. The residue was purified by flash chromatography (EtOAc – petroleum ether, 9:6) to give **9** as a white solid (5.7 g, 40.7%). m.p. 105-107℃; ^{1}H-NMR ($CDCl_3$, 600 MHz): δ 5.24-5.21 (t, *J* = 9.6 Hz, 1H), 5.11-5.07 (t, *J* = 9.6 Hz, 1H), 5.04-5.01 (t, *J* = 9.6 Hz, 1H), 4.58-4.57(d, *J* = 7.8 Hz, 1H), 4.28-4.25(dd, *J* = 12.4, 5.0 Hz, 1H), 4.19-4.16 (m, 2H), 2.09 (s, 3H, OAc), 2.08

(s, 3H, OAc), 2.03 (s, 3H, OAc), 2.01 (s, 3H, OAc); ^{13}C NMR ($CDCl_3$, 150 MHz): δ 170.8, 170.5, 169.6, 169.5, 101.1, 72.7, 72.0, 71.1, 69.9, 68.4, 61.9, 30.0, 20.9, 20.8, 20.7, 20.6; ESI-MS 477.1 $(M + Na)^+$.

Preparation of side chain intermediates (**11-19**) according to the procedure described for compound **10**.

3-bromopropyl 2,3,4,6-Tetra-O-acetyl-β-D-glucopyranoside (11). 43%, by reaction of alpha-D-Glucose pentaacetate with 3-bromo-1-propanol (1.2 equiv.) in dry DCM (20h), followed by chromatography of the product on silica gel, eluting with EtOAc–petroleum ether (9:6). m.p. 46-49℃; ^{1}H-NMR ($CDCl_3$, 600 MHz): δ 5.23-5.20 (dt, *J* = 9.6, 3.3 Hz, 1H), 5.10-5.07 (dt, *J* = 9.8, 3.2 Hz, 1H), 5.00-4.98 (dt, *J* = 8.0, 3.0 Hz, 1H), 4.53-4.51 (dd, *J* = 8.0, 3.3 Hz, 1H), 4.28-4.26 (dt, *J* = 12.4, 3.6 Hz, 1H), 4.16-4.14 (dt, *J* = 12.4, 3.1 Hz, 1H), 4.01-3.97 (m, 1H), 3.72-3.69 (m, 2H), 3.49-3.46 (m, 2H), 2.19-2.15 (m, 2H), 2.09 (s, 3H, OAc), 2.07 (s, 3H, OAc), 2.03 (s, 3H, OAc), 2.00 (s, 3H, OAc). ^{13}C NMR ($CDCl_3$, 150 MHz): δ 170.8, 170.4, 169.5, 169.4, 101.1, 72.8, 71.9, 71.3, 68.5, 67.4, 62.0, 32.3, 30.2, 20.8, 20.7, 20.6, 20.5; ESI-MS 491.0 $(M + Na)^+$.

9-bromononyl 2,3,4,6-Tetra-O-acetyl-β-D-glucopyranoside (12). 48%, by reaction of alpha-D-Glucose pentaacetate with 9-bromo-1-nonanol (1.2 equiv.) in dry DCM (20h), followed by chromatography of the product on silica gel, eluting with EtOAc–petroleum ether (3:1). m.p. 45-47℃; ^{1}H-NMR ($CDCl_3$, 600 MHz): δ 5.22-5.19 (t, *J* = 9.7 Hz, 1H), 5.11-5.07 (t, *J* = 9.9 Hz, 1H), 5.00-4.97 (dd, *J* = 9.6, 8.0 Hz, 1H), 4.50-4.49 (d, *J* = 8.0 Hz, 1H), 4.28-4.25 (dd, *J* = 12.4, 4.7 Hz, 1H), 4.15-4.12 (dd, *J* = 12.4, 2.5 Hz, 1H), 3.89-3.85 (m, 1H), 3.71-3.67 (m, 1H), 3.49-3.45 (m, 1H), 3.42-3.40 (t, *J* = 6.9 Hz, 2H), 2.09 (s, 3H, OAc), 2.04 (s, 3H, OAc), 2.03 (s, 3H, OAc), 2.01 (s, 3H, OAc), 1.87-1.82 (m, 2H), 1.59-1.54 (m, 2H), 1.43-1.39 (m, 2H), 1.31-1.26 (m, 8H). ^{13}C NMR ($CDCl_3$, 150 MHz): δ 170.8, 170.4, 169.5, 169.4, 100.9, 72.9. 71.8, 71.4, 70.3, 68.5, 62.1, 34.1, 32.9, 29.5, 29.4, 29.3, 28.8, 28.2, 25.8, 20.8, 20.7, 20.6, 20.5; ESI-MS 557.1 $(M + Na)^+$.

2-bromoethyl 2,3,4,6-Tetra-O-acetyl-β-D-galactopyranoside (13). ^{1}H-NMR ($CDCl_3$, 600 MHz): δ 5.48-5.47 (d, *J* = 3.9 Hz, 1H), 5.38-5.36 (dd, *J* = 11.0, 3.9 Hz, 1H), 5.20-5.19 (d, *J* = 3.8 Hz, 1H), 5.13-5.10 (dd, *J* = 10.4, 3.3 Hz, 1H), 4.35-4.33 (t, *J* = 6.6 Hz, 1H), 4.14-4.08 (m, 2H), 4.01-3.98 (m, 1H), 3.86-3.82 (m, 1H), 3.53-3.51 (t, *J* = 6.1 Hz, 2H), 2.16 (s, 3H, -OAc), 2.10 (s, 3H, -OAc), 2.06 (s, 6H, -OAc), 2.00 (s, 3H, -OAc); ^{13}C NMR ($CDCl_3$, 150 MHz): δ 170.6, 170.3, 170.1, 96.5, 68.7, 68.1, 67.5, 66.8, 61.9, 58.5, 31.1, 20.8, 20.7, 20.6, 18.5; ESI-MS 477.0 (M + Na)+.

3-bromopropyl 2,3,4,6-Tetra-O-acetyl-β-D-galactopyranoside (14). ^{1}H-NMR ($CDCl_3$, 600 MHz): δ5.38-5.37 (d, *J* = 3.3 Hz, 1H), 5.18-5.16 (t, *J* = 7.7 Hz, 1H), 5.02-5.01 (dd, *J* = 7.6, 3.3 Hz, 1H), 4.48-4.46 (d, *J* = 7.7 Hz, 1H), 4.17-4.16 (q, *J* = 6.6 Hz, 1H), 4.13-4.12 (t, *J* = 6.5 Hz, 1H), 4.01-3.99 (m, 1H), 3.91-3.90 (m, 1H), 3.71-3.68 (m, 1H), 3.48-3.46 (m, 2H), 2.14 (s, 3H, OAc), 2.08 (s, 3H, OAc), 2.04 (s, 3H, OAc), 1.97 (s, 3H, OAc), 1.06-1.05 (m, 2H); ^{13}C

NMR ($CDCl_3$, 150 MHz): δ 170.5, 170.4, 170.3, 169.9, 101.6, 70.9, 70.8, 68.9, 67.4, 67.1, 61.4, 32.3, 30.3, 20.9, 20.8, 20.7, 20.6; ESI-MS 491.0 (M + Na)+.

Peracetyl 2-Bromoethyl Lactose (15*).* m.p. 76-79℃; ^{1}H NMR ($CDCl_3$, 600 MHz) δ: 5.35-5.34 (d, *J* = 3.7 Hz, 1H), 5.22-5.19 (t, *J* = 9.6 Hz, 1H), 5.13-5.10 (dd, *J* = 10.5, 7.7 Hz, 1H), 4.97-4.90 (m, 2H), 4.54-4.48 (m, 3H), 4.15-4.07 (m, 4H), 3.89-3.87 (t, *J* = 6.9 Hz, 1H), 3.83-3.78 (m, 2H), 3.64-3.61 (m, 1H), 3.46-3.43 (m, 2H), 2.16 (s, 3H, OAc), 2.13 (s, 3H, OAc), 2.07 (s, 6H, OAc), 2.05 (s, 3H, OAc), 2.05 (s, 3H, OAc), 1.97 (s, 3H, OAc); ^{13}C NMR ($CDCl_3$, 150 MHz) δ: 170.5, 170.4, 170.2, 170.1, 169.9, 169.8, 169.2, 101.2, 100.9, 76.2, 72.8, 72.7, 71.5, 71.0, 70.8, 69.9, 69.2, 66.7, 61.9, 60.9, 29.9; ESI-MS 765.1 $(M + Na)^+$.

Peracetyl 3-Bromopropyl Lactose (16). m.p. 62-64℃; ^{1}H-NMR ($CDCl_3$, 600 MHz): δ 5.35-5.34 (d, *J* = 3.3 Hz, 1H), 5.21-5.20 (t, *J* = 6.1 Hz, 1H), 5.11-5.09 (m, 1H), 4.97-4.96 (m, 1H), 4.89-4.88 (m, 1H), 4.49-4.48 (m, 3H), 4.13-4.11 (m, 3H), 3.95-3.93 (m, 1H), 3.87-3.86 (m, 1H), 3.79-3.79 (m, 1H), 3.68-3.66 (m, 1H), 3.64-3.62 (m, 1H), 3.46-3.45 (m, 2H), 2.16 (s, 3H, OAc), 2.12-2.11 (m, 2H), 2.11 (s, 3H, OAc), 2.06 (s, 6H, OAc), 2.05 (s, 6H, OAc), 1.97 (s, 3H, OAc). ^{13}C NMR ($CDCl_3$, 150 MHz): δ 170.5, 170.4, 170.3, 170.2, 169.8, 169.7, 169.2, 101.1, 100.9, 76.3, 72.7, 71.7, 71.0, 70.8, 69.2, 67.4, 66.7, 66.6, 62.0, 60.9, 32.4, 30.1, 20.8, 20.7, 20.6, 20.5, 20.4, 20.3, 20.2; ESI-MS 781.1 $(M + Na)^+$.

2-bromoethyl 2,3,4-Tri-O-acetyl-α-L-rhamnopyranoside (17). m.p. 69-71℃; ^{1}H-NMR ($CDCl_3$, 600 MHz): δ 5.31-5.29 (dd, *J* = 10.1, 3.2 Hz, 1H), 5.27-5.26 (m, 1H), 5.10-5.08 (t, *J* = 10.1 Hz, 1H), 4.79-4.78 (d, *J* = 1.4 Hz, 1H), 4.00-3.96 (m, 2H), 3.86-3.83 (m, 1H), 3.51-3.49 (t, *J* = 5.9 Hz, 2H), 2.16 (s, 3H, OAc), 2.06 (s, 3H, OAc), 2.00 (s, 3H, OAc), 1.24-1.22 (d, *J* = 5.9 Hz, 3H). ^{13}C NMR ($CDCl_3$, 150 MHz): δ 170.3, 170.2, 170.1, 97.6, 71.0, 69.8, 69.1, 68.2, 66.9, 29.8, 21.0, 20.9, 20.8, 17.4; ESI-MS 419.0 $(M + Na)^+$.

3-bromopropyl 2,3,4-Tri-O-acetyl- α -L-rhamnopyranoside (18). m.p. 46-49℃; ^{1}H NMR ($CDCl_3$, 600 MHz) δ: 5.27-5.25 (dd, *J* = 10.1, 3.0 Hz, 1H), 5.24-5.23 (q, *J* = 1.7 Hz, 1H), 5.09-5.06 (t, *J* = 9.9 Hz, 1H), 4.75-4.74 (d, *J* = 1.7 Hz, 1H), 3.92-3.86 (m, 2H), 3.57-3.52 (m, 3H), 2.16 (s, 3H, -OAc), 2.13-2.08 (m, 2H), 2.06 (s, 3H, -OAc), 1.99 (s, 3H, -OAc), 1.24-1.23 (d, *J* = 6.4 Hz, 3H); ^{13}C NMR ($CDCl_3$, 150 MHz) δ: 170.3, 170.1, 170.0, 97.6, 71.1, 69.8, 69.2, 66.6, 65.3, 32.2, 30.3, 21.0, 20.9, 20.8, 17.5; ESI-MS 433.0 $(M + Na)^+$.

9-bromononyl 2,3,4-Tri-O-acetyl- α -L-rhamnopyranoside (19). Liquid; ^{1}H-NMR ($CDCl_3$, 600 MHz): δ 5.31-5.29 (dd, *J* = 10.1, 3.5 Hz, 1H), 5.23-5.22 (m, 1H), 5.08-5.04 (t, *J* = 9.9 Hz, 1H), 4.71-4.70 (d, *J* = 1.6 Hz, 1H), 3.88-3.86 (m, 1H), 3.67-3.64 (m, 1H), 3.42-3.40 (m, 3H), 2.15 (s, 3H, OAc), 2.05 (s, 3H, OAc), 1.99 (s, 3H, OAc), 1.87-1.84 (m, 2H), 1.62-1.57 (m, 2H), 1.34-1.30 (m, 8H), 1.23-1.22 (d, *J* = 6.1 Hz, 3H). ^{13}C NMR ($CDCl_3$, 150 MHz): δ 170.3, 170.2, 170.1, 97.5, 71.3, 70.1, 69.3, 68.3, 66.3, 34.1, 32.9, 29.4, 29.3, 29.2, 28.8, 28.2, 26.1, 21.1, 20.9, 20.8, 17.5; ESI-MS 517.1 $(M + Na)^+$.

2-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)quinazolin-6-yloxy)ethyl 2,3,4,6-Tetra-O-acetyl-β-D-glucopyranoside (20a)

A suspension of **10a** (395 mg, 1 mmol) and potassium carbonate (276.5 mg, 2 mmol) in dry DMF (30 mL) was stirred at room temperature for 20 min, then **10** (683 mg, 1.5 mmol) was added and the mixture was stirred at 80℃ for 8 h under N_2 atmosphere. After completion the solvent was removed under reduced pressure and then purified by chromatography on silica gel eluting with EtOAc-petroleum ether (3:1) to give the product as yellow solid (470 mg, 61%). m.p. 86-88℃; ^{1}H-NMR ($CDCl_3$, 600 MHz): δ 9.61(br, s, 1H, NH), 8.51 (s, 1H, ArH), 8.01-8.00 (d, *J* = 2.3 Hz, 1H, ArH), 7.91-7.90 (d, *J* = 2.3 Hz, 1H, ArH), 7.75-7.73 (dd, *J* = 8.7, 3.2 Hz, 2H, ArH), 7.54-7.52 (dd, *J* = 9.2, 2.8 Hz, 1H, ArH), 7.50-7.46 (m, 1H, ArH), 7.35-7.32 (d, *J* = 7.8 Hz, 2H), 7.30-7.28 (d, *J* = 9.1 Hz, 1H, ArH), 7.21-7.18 (dt, *J* = 9.8, 2.3 Hz, 1H), 5.33-5.30 (t, *J* = 9.6 Hz, 1H), 5.27 (s, 2H), 4.98-4.97 (d, *J* = 7.8 Hz, 1H), 4.96-4.93 (t, *J* = 9.6 Hz, 1H), 4.84-4.82 (dd, *J* = 9.6, 7.8 Hz, 1H), 4.31-4.28 (t, *J* = 7.4 Hz, 2H), 4.22-4.18 (dd, *J* = 12.4, 5.0 Hz, 1H), 4.16-4.13 (m, 1H), 4.05-4.04 (m, 2H), 3.99-3.95 (m, 1H), 2.01 (s, 3H, OAc), 1.99 (s, 3H, OAc), 1.94 (s, 3H, OAc), 1.90 (s, 3H, OAc); ^{13}C NMR ($CDCl_3$, 150 MHz): δ 170.6, 170.1, 169.9, 169.6, 157.4, 157.0, 152.9, 150.2, 145.5, 140.2, 133.8, 131.1, 130.0, 124.6, 123.9, 122.8, 121.6, 116.0, 115.3, 115.2, 114.9, 114.7, 114.5, 103.5, 100.2, 72.6, 71.4, 71.2, 69.9, 68.7, 68.2, 68.0, 62.3, 21.0, 20.9, 20.8, 20.7; ESI-MS 770.2 $(M + H)^+$; HRMS(ESI): calcd. for $C_{37}H_{38}N_3O_{12}FCl$ 770.2128, found 770.2150.

The following compounds (**21a-39a**) were prepared by a method similar to that for **20a**.

3-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)quinazolin-6-yloxy)propyl 2,3,4,6-Tetra-O-acetyl-β-D-glucopyranoside (21a). m.p. 96-98℃; ^{1}H NMR ($CDCl_3$, 600 MHz): δ 8.65 (s, 1H, ArH), 8.21 (br, s, 1H, NH), 7.84-7.82 (d, *J* = 9.2 Hz, 1H, ArH), 7.79-7.78 (d, *J* = 2.8 Hz, 1H, ArH), 7.67-7.65 (dd, *J* = 8.7, 2.3 Hz, 1H, ArH), 7.42-7.40 (dd, *J* = 8.7, 2.3 Hz, 1H, ArH), 7.37-7.34 (m, 1H, ArH), 7.31-7.30 (d, *J* = 2.7 Hz, 1H, ArH), 7.25 (s, 1H, ArH), 7.23 (s, 1H, ArH), 7.04-7.02 (dt, *J* = 10.6, 1.9 Hz, 1H, ArH), 6.99-6.98 (d, *J* = 9.2 Hz, 1H, ArH), 5.24-5.22 (t, *J* = 9.7 Hz, 1H), 5.16 (s, 2H), 5.12-5.08 (t, *J* = 9.7 Hz, 1H), 4.55-4.54 (d, *J* = 7.8 Hz, 1H), 4.29-4.26 (dd, *J* = 10.6, 5.0 Hz, 1H), 4.22 (d, *J* = 2.34 Hz, 1H), 4.20-4.19 (t, *J* = 2.3 Hz, 1H), 4.18-4.15 (t, *J* = 4.2 Hz, 1H), 4.12-4.20 (m, 1H), 4.07-4.04 (m, 1H), 3.77-3.75 (dd, *J* = 6.0, 2.2 Hz, 1H), 2.12-2.08 (m, 2H), 2.06 (s, 3H, OAc), 2.05 (s, 3H, OAc), 2.00 (s, 3H, OAc), 1.97 (s, 3H, OAc); ^{13}C NMR ($CDCl_3$, 150 MHz): δ 171.1, 170.4, 170.3, 169.6, 157.3, 152.9, 150.9, 139.3, 132.9, 130.3, 130.2, 130.1, 125.1, 124.7, 123.4, 122.5, 121.9, 115.7, 115.1, 114.9, 114.5, 114.1, 114.0, 100.8, 100.7, 72.5, 71.9, 70.5, 68.4, 66.5, 65.2, 61.8, 58.5, 29.1, 20.9, 20.8, 20.7, 20.6; ESI-MS 784.4 $(M + H)^+$; HRMS (ESI): calcd for $C_{38}H_{40}N_3O_{12}FCl$, 784.2285; found 784.2269.

2-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)quinazolin-6-yloxy)ethyl 2,3,4-Tri-O-acetyl -α-L-rhamnopyranoside (22a)

By reaction of **10a** with **17** in the solvent DMF for 8 h, followed by chromatography of the product on silica gel eluting with EtOAc–petroleum ether (2:1) to give **23a** in 63% yield. m.p. 212-214℃; ^{1}H-NMR ($CDCl_3$, 600 MHz): δ 8.66 (s, 1H, ArH), 8.13 (br, s, 1H, ArH), 7.85-7.84 (d, *J* = 7.7 Hz, 1H, ArH), 7.81 (d, *J* = 2.3 Hz, 1H, ArH), 7.65-7.64 (dd, *J* = 8.7, 2.3 Hz,

1H, ArH), 7.44-7.43 (m, 2H, ArH), 7.36-7.34 (q, *J* = 5.9 Hz, 1H, ArH)，7.23-7.21 (m, 2H, ArH), 7.02-7.00 (dt, *J* = 8.3, 1.8 Hz, 1H, ArH), 6.96-6.95 (d, *J* = 9.2 Hz, 1H, ArH), 5.31-5.29 (m, 2H), 5.13 (s, 2H), 5.11-5.09 (t, *J* = 9.6 Hz, 1H), 4.93 (s, 1H), 4.23-4.21 (m, 1H), 4.16-4.15 (m, 1H), 4.03-4.01 (m, 1H), 3.96-3.94 (m, 1H), 3.89-3.86 (m, 1H), 2.18 (s, 3H, OAc), 2.02 (s, 3H, OAc), 1.98 (s, 3H, OAc), 1.23-1.22 (d, J=6.00 Hz, 3H); ^{13}C NMR ($CDCl_3$, 150 MHz): δ 170.7, 170.5, 170.0, 157.3, 157.0, 153.2, 150.9, 145.7, 139.2, 132.9, 130.3, 124.8, 124.1, 123.5, 122.5, 122.0, 115.8, 115.1, 114.9, 114.5, 114.2, 114.0, 103.6, 97.9, 71.0, 70.5, 70.1, 69.2, 68.3, 66.7, 66.3, 21.1, 20.9, 18.5, 17.5; ESI-MS 712.2 $(M + H)^+$; HRMS(ESI): calcd. for $C_{35}H_{36}N_3O_{10}FCl$ 712.2073, found 712.2086.

3-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)quinazolin-6-yloxy)propyl 2,3,4-Tri-O-acetyl -α-L-rhamnopyranoside (23a)

By reaction of **10a** with **18** in the solvent DMF for 8 h, followed by chromatography of the product on silica gel eluting with EtOAc–petroleum ether (2:1) to give **24a** in 59% yield. m.p. 67-69℃; ^{1}H-NMR ($CDCl_3$, 600 MHz): δ 8.64 (s, 1H, ArH), 8.13 (br, s, 1H, ArH), 7.84-7.82 (d, *J* = 8.7 Hz, 1H, ArH), 7.80-7.79 (d, *J* = 2.7 Hz, 1H, ArH), 7.63-7.62 (dd, *J* = 8.7, 2.7 Hz, 1H, ArH), 7.44-7.42 (dd, *J* = 9.2, 2.3 Hz, 1H, ArH), 7.40 (d, *J* = 2.8 Hz, 1H, ArH), 7.37-7.34 (m, 1H, ArH)，7.24-7.23 (d, *J* = 7.8 Hz, 1H, ArH), 7.22-7.00 (d, *J* = 9.1 Hz, 1H, ArH), 7.04-7.02 (dt, *J* = 8.7, 2.3 Hz, 1H, ArH), 6.97-6.95 (d, *J* = 8.7 Hz, 1H, ArH), 5.56-5.53 (dd, *J* = 9.3, 3.2 Hz, 1H), 5.25-5.34 (q, *J* = 2.4 Hz, 1H), 5.14 (s, 2H), 5.04-5.01 (t, *J* = 10.1 Hz, 1H), 4.78 (d, *J* = 1.4 Hz, 1H), 4.28-4.27 (m, 1H), 4.15-4.13 (m, 1H), 3.97-3.95 (m, 1H), 3.81-3.78 (m, 1H), 3.66-3.64 (m, 1H), 2.05-2.03 (m, 2H), 2.13 (s, 3H, OAc), 1.93 (s, 3H, OAc), 1.86 (s, 3H, OAc), 1.15-1.14 (d, *J* = 6.4 Hz, 3H); ^{13}C NMR ($CDCl_3$, 150 MHz): δ 170.9, 170.7, 170.0, 157.3, 153.0, 150.9, 145.5, 139.2, 132.9, 130.3, 130.2, 125.2, 124.2, 123.4, 122.6, 122.4, 115.8, 115.1, 114.9, 114.4, 114.1, 114.0, 101.8, 97.2, 70.9, 70.5, 70.1, 69.2, 66.6, 65.4, 64.3, 29.1, 21.0, 20.8, 20.7, 17.4; ESI-MS 725.7 $(M + H)^+$; HRMS(ESI): calcd. for $C_{36}H_{38}N_3O_{10}FCl$ 726.2230, found 726.2214.

2-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)quinazolin-6-yloxy)ethyl 2,3,4,6-Tetra-O-acetyl- β -D-galactopyranoside (24a). m.p. 82-84 °C; ^{1}H NMR ($CDCl_3$, 600 MHz): δ 9.65 (br, s, 1H, NH), 8.52 (s, 1H, ArH), 8.00-7.99 (d, *J* = 2.5 Hz, 1H, ArH), 7.92-7.91 (d, *J* = 2.2 Hz, 1H, ArH), 7.74-7.73 (m, 2H, ArH), 7.54-7.52 (dd, *J* = 8.7 Hz, 1H, ArH), 7.49-7.47 (m, 1H, ArH), 7.35-7.32 (m, 3H, ArH), 7.21-7.19 (dt, *J* = 8.2, 2.2 Hz, 1H, ArH), 5.29-5.28 (d, *J* = 3.7 Hz, 1H), 5.27-5.26 (m, 2H), 5.22-5.19 (dd, *J* = 10.5, 3.7 Hz, 1H), 5.01-4.98 (t, *J* = 7.8 Hz, 1H), 4.89-4.88 (d, *J* = 7.7 Hz, 1H), 4.30-4.29 (t, *J* = 5.0 Hz, 2H), 4.27-4.26 (t, *J* = 5.0 Hz, 1H), 4.15-4.12 (m, 1H), 4.08-4.05 (m, 2H), 3.99-3.97 (m, 1H), 2.13 (s, 3H, -OAc), 1.99 (s, 3H, -OAc), 1.92 (s, 6H, -OAc); ^{13}C NMR ($CDCl_3$, 150 MHz): δ 170.5, 170.4, 170.1, 170.0, 163.6, 162.9, 162.0, 157.4, 157.0, 152.9, 150.2, 140.2, 133.8, 131.2, 129.9, 124.8, 124.6, 123.9, 122.8, 121.6, 114.9, 114.7, 114.5, 103.5, 100.7, 70.6, 70.5, 69.9, 69.2, 68.1, 68.0, 67.9, 61.9, 21.0, 20.9, 20.8, 20.7; ESI-MS 770.2 $(M + H)^+$; HRMS (ESI): calcd for $C_{37}H_{38}N_3O_{12}FCl^+$, 770.2128; found 770.2125.

3-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)quinazolin-6-yloxy)propyl 2,3,4,6-Tetra-O-acetyl- β -D-galactopyranoside (25a). m.p. 66-69 °C; ^{1}H NMR ($CDCl_3$, 600 MHz): δ 8.66(s, 1H, ArH), 8.20 (br, s, 1H, NH), 7.83-7.81 (d, *J* = 9.1 Hz, 1H, ArH), 7.76-7.75 (m, 2H, ArH), 7.42-7.40 (dd, *J* = 9.1, 2.3 Hz, 1H, ArH), 7.37-7.35 (dt, *J* = 7.8, 1.9 Hz, 1H, ArH), 7.30-7.29 (d, *J* = 2.3 Hz, 1H, ArH), 7.24-7.22 (t, *J* = 7.3 Hz, 2H, ArH), 7.04-7.02 (dt, *J* = 8.7, 2.3 Hz, 1H, ArH), 6.98-6.97 (d, *J* = 8.7 Hz, 1H, ArH), 5.42-5.41 (d, *J* = 3.2 Hz, 1H), 5.25-5.23 (dd, *J* = 10.6, 7.8 Hz, 1H), 5.15 (s, 2H), 5.07-5.04 (dd, *J* = 10.6, 3.7 Hz, 1H), 4.51-4.50 (d, *J* = 7.8 Hz, 1H), 4.27-4.22 (m, 2H), 4.16-4.11 (m, 3H), 3.94-3.92 (t, *J* = 6.4 Hz, 1H), 3.71-3.70 (m, 1H), 2.22-2.14 (m, 4H), 2.11 (s, 3H, OAc), 2.05 (s, 3H, OAc), 2.03 (s, 3H, OAc), 1.97 (s, 3H, OAc); ^{13}C NMR ($CDCl_3$, 150 MHz): δ 170.7, 170.6, 170.3, 170.2, 157.2, 157.1, 152.9, 150.7, 139.2, 133.1, 130.3, 130.2, 125.2, 124.4, 123.3, 122.5, 121.8, 115.8, 115.1, 115.0, 114.4, 114.1, 114.0, 101.4, 100.6, 70.9, 70.6, 70.5, 69.7, 67.0, 66.5, 65.2, 61.3, 29.0, 20.9, 20.8, 20.7, 20.6; ESI-MS 784.2 $(M + H)^+$; HRMS (ESI): calcd for $C_{38}H_{40}N_3O_{12}FCl^+$, 784.2285; found 784.2263.

9-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)quinazolin-6-yloxy)nonyl 2,3,4,6-Tetra-O-acetyl-β-D-glucopyranoside (26a)

By reaction of **10a** with **12** in the solvent DMF for 8 h, followed by chromatography of the product on silica gel eluting with EtOAc–petroleum ether (3:1) to give **27a** in 72% yield. m.p. 55-57℃; ^{1}H-NMR ($CDCl_3$, 600 MHz): δ 8.66 (s, 1H, ArH), 7.85-7.83 (d, *J* = 7.6 Hz, 1H, ArH), 7.81-7.80 (d, *J* = 2.8 Hz, 1H, ArH), 7.59 (br, s, 1H, ArH), 7.55-7.54 (dd, *J* = 8.7, 2.8 Hz, 1H, ArH), 7.45-7.43 (dd, *J* = 9.2, 2.3 Hz, 1H, ArH), 7.37-7.34 (q, *J* = 5.9 Hz, 1H, ArH)，7.24-7.18 (m, 3H, ArH), 7.03-7.01 (dt, *J* = 8.7, 2.3 Hz, 1H, ArH), 6.98-6.97 (d, *J* = 9.1 Hz, 1H, ArH), 5.21-5.18 (t, *J* = 9.2 Hz, 1H), 5.15 (s, 2H), 5.10-5.08 (t, *J* = 9.6 Hz, 1H), 5.01-4.99 (t, *J* = 8.2 Hz, 1H), 4.49-4.48 (d, *J* = 8.2 Hz, 1H), 4.26-4.25 (q, *J* = 4.6 Hz, 1H), 4.14-4.13 (dd, *J* = 9.2, 2.3 Hz, 1H), 4.04-4.02 (t, *J* = 6.4 Hz, 2H), 3.87-3.85 (m, 1H), 3.69-3.65 (m, 1H), 3.48-3.46 (m, 1H), 2.08 (s, 3H, OAc), 2.04 (s, 3H, OAc), 2.01 (s, 3H, OAc), 1.99 (s, 3H, OAc), 1.84-1.82 (m, 2H), 1.57-1.55 (m, 2H), 1.46-1.44 (m, 2H), 1.38-1.29 (m, 8H); ^{13}C NMR ($CDCl_3$, 150 MHz): δ 170.9, 170.4, 169.5, 169.4, 157.7, 157.0, 152.8, 151.0, 145.4, 132.6, 130.4, 130.3, 130.2, 124.8, 124.4, 123.6, 123.5, 121.9, 115.4, 115.0, 114.9, 114.5, 114.1, 114.0, 100.9, 72.9, 71.8, 71.4, 70.5, 70.3, 68.5, 68.3, 62.2, 29.5, 29.4, 29.2, 29.1, 26.0, 25.9, 20.9, 20.8, 20.7, 20.6, 18.5; ESI-MS 868.2 $(M + H)^+$; HRMS(ESI): calcd. for $C_{44}H_{52}N_3O_{12}FCl$ 868.3224, found 868.3265.

9-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)quinazolin-6-yloxy)nonyl 2,3,4-Tri-O-acetyl-α-L-rhamnopyranoside (27a). m.p. 52-54 °C; ^{1}H NMR ($CDCl_3$, 600 MHz): δ 8.61 (s, 1H, ArH), 7.82-7.81 (m, 3H, ArH), 7.55-7.53 (dd, *J* = 8.7, 2.3 Hz, 1H, ArH), 7.42-7.40 (dd, *J* = 9.2, 2.3 Hz, 1H, ArH), 7.37-7.34 (m, 1H, ArH), 7.24-7.23 (d, *J* = 7.7 Hz, 1H, ArH), 7.22-7.20 (d, *J* = 9.7 Hz, 1H, ArH), 7.18 (s, 1H, ArH)，7.04-7.01 (dt, *J* = 7.8, 2.3 Hz, 1H, ArH), 6.96-6.95 (d, *J* = 8.7 Hz, 1H, ArH), 5.32-5.30 (dd, *J* = 10.1, 3.7 Hz, 1H), 5.23-5.22 (q, *J* = 3.7 Hz, 1H), 5.15 (s, 2H), 5.08-5.06 (t, *J* = 10.1 Hz, 1H), 4.71 (d, *J* = 1.3 Hz, 1H), 4.04-4.02 (t, *J*

= 6.4 Hz, 2H), 3.88-3.86 (m, 1H), 3.68-3.66 (m, 1H), 3.42-3.40 (m, 1H), 2.15 (s, 3H, OAc), 2.05 (s, 3H, OAc), 1.98 (s, 3H, OAc), 1.85-1.82 (m, 2H), 1.60-1.58 (m, 2H), 1.49-1.46 (m, 2H), 1.39-1.32 (m, 8H), 1.33-1.32 (d, *J* = 6.4 Hz, 3H); ^{13}C-NMR ($CDCl_3$, 150 MHz): δ 170.4, 170.3, 170.1, 163.9, 162.3, 157.7, 157.0, 152.3, 151.1, 139.2, 130.3, 124.8, 124.7, 123.5, 122.5, 121.9, 115.8, 115.1, 114.8, 114.5, 114.1, 114.0, 100.9, 97.5, 71.3, 70.5, 70.1, 69.3, 68.7, 68.2, 66.3, 29.5, 29.3, 29.2, 29.1, 29.0, 26.1, 26.0, 21.0, 20.9, 20.8, 18.5; ESI-MS 810.3 (M + H)$^+$; HRMS (ESI): calcd for $C_{42}H_{50}N_3O_{10}FCl^+$, 810.3169; found 810.3195.

2-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)quinazolin-6-yloxy)ethyl 4-O-(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)-2,3,6-Tri-O-acetyl-β-D-glucopyranoside (28a). m.p. 109-111 °C; ^{1}H NMR ($CDCl_3$, 600 MHz): δ 9.58 (br, s, 1H, NH), 8.50 (s, 1H, ArH), 8.00-7.99 (d, *J* = 2.7 Hz, 1H, ArH), 7.89-7.88 (d, *J* = 2.8 Hz, 1H, ArH), 7.74-7.72 (dd, *J* = 9.1, 2.3 Hz, 2H, ArH), 7.54-7.50 (dd, *J* = 11.5, 2.1 Hz, 1H, ArH), 7.50-7.46 (m, 1H, ArH), 7.35-7.33 (d, *J* = 7.8 Hz, 2H), 7.30-7.28 (d, *J* = 9.2 Hz, 1H, ArH), 7.21-7.18 (dt, *J* = 9.8, 2.3 Hz, 1H), 5.27-5.25 (m, 4H), 5.19-5.16 (m, 2H), 4.91-4.90 (d, *J* = 8.2 Hz, 1H), 4.86-4.85 (t, *J* = 7.3 Hz, 1H), 4.77-4.75 (q, *J* = 7.3 Hz, 2H), 4.31-4.28 (m, 3H), 4.24-4.23 (t, *J* = 3.3 Hz, 1H), 4.12-4.09 (m, 2H), 4.03-4.01 (m, 1H), 4.09-4.08 (m, 1H), 4.08-4.07 (m, 1H), 3.83-3.82 (t, *J* = 9.2 Hz, 1H), 2.11 (s, 3H, OAc), 2.07 (s, 3H, OAc), 2.01 (s, 3H, OAc), 2.00 (s, 3H, OAc), 1.98 (s, 3H, OAc), 1.91 (s, 3H, OAc), 1.88 (s, 3H, OAc); ^{13}C NMR ($CDCl_3$, 150 MHz): δ 170.8, 170.5, 170.4, 170.1, 170.0, 169.7, 169.6, 157.4, 157.0, 152.9, 150.1, 145.6, 140.3, 133.9, 131.2, 131.1, 130.1, 124.6, 123.9, 122.8, 122.4, 121.6, 115.3, 114.9, 114.7, 114.5, 103.5, 100.5, 100.0, 76.8, 72.9, 72.3, 71.7, 70.8, 70.2, 69.9, 69.5, 68.1, 68.0, 67.6, 62.8, 61.4, 21.1, 21.0, 20.9, 20.8, 20.7, 20.6, 20.5; ESI-MS 1058.4 (M + H)$^+$; HRMS (ESI): calcd for $C_{49}H_{54}N_3O_{20}FCl^+$, 1058.2973; found 1058.2926.

3-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)quinazolin-6-yloxy)propyl 4-O-(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)-2,3,6-Tri-O-acetyl-β-D-glucopyranoside (29a). m.p. 95-97 °C; ^{1}H NMR ($CDCl_3$, 600 MHz): δ 9.61 (br, s, 1H, NH), 8.49 (s, 1H, ArH), 7.99 (d, *J* = 2.8 Hz, 1H, ArH), 7.88 (d, *J* = 2.3 Hz, 1H, ArH), 7.74-7.72 (dt, *J* = 9.2, 1.9 Hz, 2H, ArH), 7.50-7.48 (m, 2H, ArH), 7.35-7.33 (t, *J* = 7.8 Hz, 2H, ArH), 7.30-7.28 (d, *J* = 9.2 Hz, 1H, ArH)，7.21-7.18 (dt, *J* = 7.6, 2.3 Hz, 1H, ArH), 5.26 (s, 2H), 5.23 (d, *J* = 2.3 Hz, 1H), 5.17-5.14 (m, 2H), 4.86-4.80 (m, 2H), 4.75-4.70 (m, 2H), 4.30-4.28 (d, *J* = 9.1 Hz, 1H), 4.22-4.14 (m, 3H), 4.08-4.05 (m, 1H), 4.02-4.00 (m, 2H), 3.93-3.91 (m, 1H), 3.87-3.84 (m, 1H), 3.73-3.69 (m, 1H), 2.10 (s, 3H, OAc), 2.09 (s, 3H, OAc), 2.06 (s, 3H, OAc), 2.05-2.03 (m, 2H), 2.00 (s, 3H, OAc), 1.96 (s, 3H, OAc), 1.90 (s, 3H, OAc), 1.87 (s, 3H, OAc); ^{13}C NMR ($CDCl_3$, 150 MHz): δ 170.8, 170.5, 170.4, 170.1, 169.9, 169.7, 168.6, 157.4, 157.2, 152.9, 150.2, 145.5, 140.3, 133.8, 131.1, 130.1, 124.6, 123.9, 122.8, 121.6, 116.0, 115.3, 115.2, 114.9, 114.7, 114.5, 103.3, 100.5, 99.6, 76.9, 72.9, 72.2, 71.7, 70.8, 70.2, 70.0, 69.4, 67.6, 66.2, 65.5, 62.7, 61.4, 31.2, 21.1, 21.0, 20.9, 20.8, 20.7, 20.6, 20.5; ESI-MS 1072.4 (M + H)$^+$; HRMS (ESI): calcd for $C_{50}H_{56}N_3O_{20}FCl$, 1072.3130; found 1072.3159.

2-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)-7-methoxyquinazolin-6-yloxy)ethyl 2,3,4,6-Tetra-O-acetyl-β-D-glucopyranoside (30a). m.p. 100-102 °C; ^{1}H NMR ($CDCl_3$, 600 MHz): δ 8.60 (s, 1H, ArH), 8.35 (br, s, 1H, NH), 7.77 (d, *J* = 2.3 Hz, 1H, ArH), 7.58-7.56 (dd, *J* = 9.2, 2.3 Hz, 1H, ArH), 7.41 (s, 1H, ArH), 7.36-7.34 (m, 1H, ArH), 7.24-7.20 (m, 3H, ArH), 7.03-7.00 (t, *J* = 8.3 Hz, 1H, ArH), 6.96-6.94 (d, *J* = 9.2 Hz, 1H, ArH), 5.27-5.24 (t, *J* = 9.7 Hz, 1H), 5.14 (s, 2H), 5.11-5.08 (t, *J* = 11.0 Hz, 2H), 4.66-4.65 (d, *J* = 7.8 Hz, 1H), 4.38-4.35 (m, 2H), 4.22-4.17 (m, 2H), 4.13-4.08 (m, 2H), 3.97 (s, 3H, -OMe), 3.73-3.71 (m, 1H), 2.06 (s, 3H, -OAc), 2.05 (s, 3H, -OAc), 2.02 (s, 3H, -OAc), 1.94 (s, 3H, -OAc); ^{13}C NMR ($CDCl_3$, 150 MHz): δ 171.4, 170.4, 170.3, 169.6, 157.0, 155.4, 153.8, 150.7, 148.8, 147.4, 139.3, 133.2, 130.3, 130.2, 124.7, 123.4, 122.6, 121.9, 115.1, 114.5, 114.0, 109.2, 107.7, 104.3, 101.5, 72.5, 72.1, 71.3, 70.5, 69.8, 68.9, 68.4, 61.4, 56.2, 21.0, 20.9, 20.8, 20.7; ESI-MS 799.7 $(M + H)^+$; HRMS (ESI): calcd for $C_{38}H_{40}N_3O_{13}FCl^+$, 800.2234; found 800.2228.

3-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)-7-methoxyquinazolin-6-yloxy)propyl 2,3,4,6-Tetra-O-acetyl-β-D-glucopyranoside (31a). m.p. 77-79 °C; ^{1}H NMR ($CDCl_3$, 600 MHz): δ 8.60 (s, 1H, ArH), 8.24 (br, s, 1H, NH), 7.76-7.75 (d, *J* = 2.7 Hz, 1H, ArH), 7.63-7.61 (dd, *J* =8.7, 2.8 Hz, 1H, ArH), 7.37-7.35 (q, *J* = 5.9 Hz, 1H, ArH), 7.13 (s, 1H, ArH), 7.27-7.26 (d, *J* = 1.9 Hz, 1H, ArH), 7.25 (s, 1H, ArH), 7.24-7.23 (t, *J* = 5.9 Hz, 1H, ArH), 7.03-7.02 (dt, *J* = 8.7, 2.3 Hz, 1H, ArH), 6.98-6.97 (d, *J* = 8.7 Hz, 1H, ArH), 5.24-5.23 (t, *J* = 9.2 Hz, 1H), 5.16 (s, 2H), 5.10-5.08 (t, *J* = 9.7 Hz, 1H), 5.04-5.03 (t, *J* = 8.3 Hz, 1H), 4.54-4.53 (d, *J* = 7.8 Hz, 1H), 4.28-4.27 (dd, *J* = 9.4, 2.2 Hz, 1H), 4.25-4.23 (m, 1H), 4.20-4.18 (m, 2H), 4.19-4.18 (m, 1H), 3.99 (s, 3H, -OMe), 3.77-3.76 (m, 2H), 2.23-2.20 (m, 1H), 2.16-2.14 (m, 1H), 2.10 (s, 3H, OAc), 2.04 (s, 3H, OAc), 2.03 (s, 3H, OAc), 2.01 (s, 3H, OAc); ^{13}C NMR ($CDCl_3$, 150 MHz): δ 171.1, 170.6, 170.3, 169.6, 156.8, 155.0, 153.5, 150.7, 148.7, 146.9, 139.3, 133.2, 130.3, 130.2, 124.7, 123.4, 122.6, 121.9, 114.9, 114.5, 114.0, 109.2, 107.6, 101.4, 100.9, 72.4, 72.0, 71.9, 70.5, 68.4, 66.6, 66.0, 61.8, 56.3, 28.9, 20.9, 20.8, 20.7, 20.6; ESI-MS 814.4 $(M + H)^+$; HRMS (ESI): calcd for $C_{39}H_{42}N_3O_{13}FCl^+$, 814.2390; found 814.2380.

2-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)-7-methoxyquinazolin-6-yloxy)ethyl 2,3,4-Tri-O-acetyl-α-L-rhamnopyranoside (32a). m.p. 89-91 °C; ^{1}H NMR ($CDCl_3$, 600 MHz): δ 8.64-8.63 (d, *J* = 4.1 Hz, 1H, ArH), 8.13 (br, s, 1H, ArH), 7.77 (s, 1H, ArH), 7.62-7.60 (t, *J* = 4.6 Hz, 1H, ArH), 7.47-7.46 (d, *J* = 3.7 Hz, 1H, ArH), 8.39-8.38 (m, 1H, ArH), 7.25-7.22 (m, 3H, ArH), 7.04-7.02 (m, 1H, ArH), 6.98-6.96 (q, *J* = 4.1 Hz, 1H, ArH), 5.34-30 (m, 2H), 5.16 (s, 2H), 5.14-5.12 (m, 1H), 4.97-4.96 (d, *J* = 2.8 Hz, 1H), 4.32-4.31 (t, *J* = 4.6 Hz, 1H), 4.20-4.19 (t, *J* = 4.1 Hz, 1H), 4.08-4.06 (m, 1H), 4.02-4.00 (m, 1H), 3.97 (s, 3H, -OMe), 3.91-3.89 (m, 1H), 3.18 (s, 3H, -OAc), 2.04 (s, 3H, -OAc), 1.99 (s, 3H, -OAc), 1.26-1.25 (d, *J* = 3.2 Hz, 3H); ^{13}C NMR ($CDCl_3$, 150 MHz): δ 170.7, 170.6, 170.0, 157.0, 156.0, 154.0, 150.0, 148.4, 139.3, 133.0, 130.3, 125.2, 123.4, 122.5, 122.4, 115.0, 114.9, 114.4, 114.1, 114.0, 109.2, 108.1, 105.7, 97.5, 70.9, 70.5, 70.1, 69.9, 69.3, 66.8, 66.0, 56.1, 21.0,

20.9, 20.8, 17.5; ESI-MS 742.1 $(M + H)^+$; HRMS (ESI): calcd for $C_{36}H_{38}N_3O_{11}FCl^+$, 742.2179; found 742.2153.

3-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)-7-methoxyquinazolin-6-yloxy)propyl 2,3,4-Tri-O-acetyl-α-L-rhamnopyranoside (33a). m.p. 85-87 °C; ^{1}H NMR ($CDCl_3$, 600 MHz): δ 8.61 (s, 1H, ArH), 7.95 (br, s, 1H, NH), 7.76-7.75 (d, *J* = 2.8 Hz, 1H, ArH), 7.58-7.57 (dd, *J* = 8.7, 2.3 Hz, 1H, ArH), 7.37-7.35 (m, 1H, ArH), 7.33-7.32 (m, 1H, ArH), 7.24-7.23 (d, *J* = 5.5 Hz, 2H, ArH), 7.22-7.20 (m, 1H, ArH), 7.03-7.02 (dt, *J* = 6.4 Hz, 1H, ArH), 6.96-6.94 (d, *J* = 9.2 Hz, 1H, ArH), 5.30-5.28 (dd, *J* = 10.1, 3.7 Hz, 1H), 5.21-5.20 (m, 1H), 5.14 (s, 2H), 5.02-4.99 (t, *J* = 9.2 Hz, 1H), 4.78-4.77 (d, *J* = 1.3 Hz, 1H), 4.33-4.31 (m, 1H), 4.15-4.14 (m, 1H), 4.01-3.99 (m, 1H), 3.98 (s, 3H, -OMe), 2.78-3.76 (m, 1H), 3.65-3.62 (m, 1H), 2.20-2.15 (m, 2H), 2.11 (s, 3H, -OAc), 1.93 (s, 3H, -OAc), 1.82 (s, 3H, -OAc), 1.14-1.12 (d, *J* = 6.4 Hz, 3H); ^{13}C NMR ($CDCl_3$, 150 MHz): δ 170.8, 170.7, 170.0, 156.9, 155.1, 153.7, 150.9, 148.8, 147.5, 139.3, 133.0, 130.3, 125.2, 123.4, 122.5, 115.0, 114.9, 114.5, 114.1, 114.0, 109.2, 107.8, 101.7, 97.2, 70.8, 70.5, 70.2, 69.2, 66.7, 65.5, 63.6, 56.2, 29.0, 21.0, 20.8, 20.6, 17.3; ESI-MS 755.6 $(M + H)^+$; HRMS (ESI): calcd for $C_{37}H_{40}N_3O_{11}FCl^+$, 756.2335; found 756.2344.

2-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)-7-methoxyquinazolin-6-yloxy)ethyl 2,3,4,6-Tetra-O-acetyl-β-D-galactopyranoside (34a). m.p. 93-95 °C; ^{1}H NMR ($CDCl_3$, 600 MHz): δ 8.62 (s, 1H, ArH), 8.21 (br, s, 1H, NH), 7.77-7.76 (d, *J* = 2.8 Hz, 1H, ArH), 7.68-7.66 (dd, *J* = 8.7, 2.3 Hz, 1H, ArH), 7.42 (s, 1H, ArH), 7.36-7.35 (q, *J* = 6.0 Hz, 1H, ArH), 7.37-7.35 (d, *J* = 11.4 Hz, 2H, ArH), 7.23-7.21 (t, *J* = 9.6 Hz, 1H, ArH), 7.04-7.02 (dt, *J* = 8.7, 2.3 Hz, 1H, ArH), 7.98-7.96 (d, *J* = 9.2 Hz, 1H, ArH), 5.44-5.43 (d, *J* = 3.2 Hz, 1H), 5.31-5.29 (dd, *J* = 10.6, 7.8 Hz, 1H), 5.15 (s, 2H), 5.09-5.07 (dd, *J* = 10.5, 3.2 Hz, 1H), 4.63-4.61 (d, *J* = 8.3 Hz, 1H), 4.39-4.36 (m, 1H), 4.32-4.27 (m, 2H), 4.22-4.19 (m, 1H), 4.12-4.10 (q, *J* = 6.4 Hz, 1H), 4.04-4.02 (m, 1H), 4.00 (s, 3H, -OMe), 3.96-3.95 (t, *J* = 6.3 Hz, 1H), 2.13 (s, 3H, OAc), 2.05 (s, 3H, OAc), 2.03 (s, 3H, OAc), 1.94 (s, 3H, OAc); ^{13}C NMR ($CDCl_3$, 150 MHz): δ 170.9, 170.8, 170.3, 170.2, 157.0, 155.7, 154.0, 150.7, 149.0, 147.8, 139.3, 133.3, 130.3, 130.2, 124.5, 123.4, 122.5, 121.8, 115.1, 114.5, 114.1, 109.3, 107.9,105.5, 101.7, 71.2, 70.7, 70.6, 70.5, 69.1, 68.8, 67.2, 61.5, 56.3, 20.9, 20.8, 20.7, 20.6; ESI-MS 800.2 $(M + H)^+$; HRMS (ESI): calcd for $C_{38}H_{40}N_3O_{13}FCl^+$, 800.2234; found 800.2202.

3-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)-7-methoxyquinazolin-6-yloxy)propyl 2,3,4,6-Tetra-O-acetyl-β-D-galactopyranoside (35a). m.p. 84-86 °C; ^{1}H NMR ($CDCl_3$, 600 MHz): δ 8.61 (s, 1H, ArH), 8.28 (br, s, 1H, NH), 7.76-7.74 (dd, *J* = 8.7, 2.8 Hz, 1H, ArH), 7.70-7.69 (d, *J* = 2.8 Hz, 1H, ArH), 7.37-7.35 (m, 1H, ArH), 7.31 (s, 1H, ArH), 7.27 (s, 1H, ArH), 7.24 (s, 1H, ArH), 7.23-7.21 (t, *J* = 6.4 Hz, 1H, ArH), 7.04-7.02 (dt, *J* = 8.7, 1.9 Hz, 1H, ArH), 6.97-6.95 (d, *J* = 8.7 Hz, 1H, ArH), 5.42-5.41 (d, *J* = 2.7 Hz, 1H), 5.25-5.23 (dd, *J* = 10.5, 7.8 Hz, 1H), 5.14 (s, 2H), 5.08-5.06 (dd, *J* = 10.6, 3.2 Hz, 1H), 4.51-4.49 (d, *J* = 7.7 Hz, 1H), 4.31-4.28 (m, 1H), 4.25-4.23 (m, 1H), 4.22-4.19 (m, 1H), 4.14-4.10 (m, 2H), 3.99 (s, 3H, -OMe), 3.94-3.93 (t, *J* = 6.4 Hz, 1H), 3.70-3.69 (dt, *J* = 9.1, 3.2 Hz, 1H), 2.26-2.12 (m, 2H),

2.09 (s, 3H, -OAc), 2.05 (s, 3H, -OAc), 2.04 (s, 3H, -OAc), 2.01 (s, 3H, -OAc); ^{13}C NMR ($CDCl_3$, 150 MHz): δ 170.7, 170.6, 170.3, 170.2, 156.7, 155.0, 153.5, 150.5, 148.5, 147.1, 139.3, 133.4, 130.3, 125.1, 124.3, 123.2, 122.5, 121.8, 114.9, 114.4, 114.1, 109.3, 107.7, 101.4, 101.3, 70.9, 70.6, 70.5, 69.8, 66.9, 66.5, 65.9, 61.3, 56.3, 28.7, 21.1, 20.9, 20.8, 20.7; ESI-MS 814.2 $(M + H)^+$; HRMS (ESI): calcd for $C_{39}H_{42}N_3O_{13}FCl^+$, 814.2390; found 814.2401.

9-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)-7-methoxyquinazolin-6-yloxy)nonyl 2,3,4,6-Tetra-O-acetyl-β-D-glucopyranoside (36a). m.p. 61-63 °C; ^{1}H NMR ($CDCl_3$, 600 MHz): δ 8.62 (s, 1H, ArH), 7.74-7.73 (d, *J* = 2.3 Hz, 1H), 7.58 (br, s, 1H, NH), 7.52-7.50 (dd, *J* = 8.7, 2.3 Hz, 1H, ArH), 7.36-7.35 (q, *J* = 6.0 Hz, 1H, ArH), 7.24-7.22 (m, 3H, ArH), 7.16 (s, 1H, ArH), 7.04-7.02 (dt, *J* = 8.3, 2.3 Hz, 1H, ArH), 6.96-6.94 (d, *J* = 8.7 Hz, 1H, ArH), 5.20-5.18 (t, *J* = 9.6 Hz, 1H), 5.14 (s, 2H), 5.10-5.08 (t, *J* = 9.7 Hz, 1H), 4.99-4.98 (t, *J* = 9.6 Hz, 1H), 4.49-4.47 (d, *J* = 7.8 Hz, 1H), 4.26-4.24 (dd, *J* = 7.8, 5.0 Hz, 1H), 4.14-4.12 (dd, *J* = 7.8, 1.9 Hz, 1H), 4.07-4.04 (t, *J* = 6.4 Hz, 2H), 3.97 (s, 3H, -OMe), 3.87-3.85 (m, 1H), 3.69-3.68 (m, 1H), 3.49-3.37 (m, 1H), 2.08 (s, 3H, -OAc), 2.03 (s, 3H, -OAc), 2.01 (s, 3H, -OAc), 1.99 (s, 3H, -OAc), 1.90-1.87 (m, 2H), 1.56-1.54 (m, 2H), 1.45-1.43 (m, 2H), 1.36-1.28 (m, 8H); ^{13}C NMR ($CDCl_3$, 150 MHz): δ 171.0, 170.4, 169.5, 169.4, 156.5, 155.2, 153.5, 150.9, 149.2, 139.2, 132.8, 130.3, 124.9, 123.5, 122.5, 122.0, 115.1, 115.0, 114.5, 114.1, 114.0, 109.0, 107.8, 100.9, 100.7, 72.9, 71.8, 71.6, 70.5, 70.2, 69.5, 68.5, 61.2, 56.3, 29.5, 29.4, 29.3, 29.2, 26.0, 25.8, 20.8, 20.7, 20.6, 20.5, 20.4, 18.5; ESI-MS 898.0 $(M + H)^+$; HRMS (ESI): calcd for $C_{45}H_{54}N_3O_{13}FCl^+$, 898.3329; found 898.3323.

9-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)-7-methoxyquinazolin-6-yloxy)nonyl 2,3,4-Tri-O-acetyl-α-L-rhamnopyranoside (37a). m.p. 62-64 °C; ^{1}H NMR ($CDCl_3$, 600 MHz): δ 8.60 (s, 1H, ArH), 7.79 (br, s, 1H), 7.75-7.74 (d, *J* = 2.3 Hz, 1H), 7.52-7.50 (dd, *J* = 9.1, 2.3 Hz, 1H), 7.36-7.35 (q, *J* = 7.8 Hz, 1H, ArH), 7.24-7.21 (m, 4H, ArH), 7.04-7.02 (dt, *J* = 7.8, 2.7 Hz, 1H, ArH), 6.94-6.93 (d, *J* = 8.7 Hz, 1H, ArH), 5.31-5.29 (dd, *J* = 9.7, 2.2 Hz, 1H), 5.23-5.22 (t, *J* = 1.4 Hz, 1H), 5.13 (s, 2H), 5.07-5.05 (t, *J* = 9.7 Hz, 1H), 4.71-4.70 (d, *J* = 1.4 Hz, 1H), 4.08-4.05 (t, *J* = 6.9 Hz, 2H), 3.96 (s, 3H, -OMe), 3.89-3.86 (m, 1H), 3.69-3.65 (m, 1H), 3.42-3.40 (m, 1H), 2.14 (s, 3H, -OAc), 2.04 (s, 3H, -OAc), 1.97 (s, 3H, -OAc), 1.89-1.87 (m, 2H), 1.59-1.56 (m, 2H), 1.46-1.43 (m, 2H), 1.35-1.31 (m, 8H), 1.23-1.22 (d, *J* = 6.4 Hz, 3H); ^{13}C NMR ($CDCl_3$, 150 MHz): δ 170.4, 170.3, 170.1, 156.6, 155.3, 153.2, 150.9, 149.3, 139.2, 132.8, 130.3, 125.0, 123.5, 122.5, 122.1, 115.1, 115.0, 114.5, 114.1, 114.0, 109.0, 107.4, 100.8, 97.4, 71.3, 70.5, 70.1, 69.5, 69.4, 68.2, 66.3, 56.3, 29.5, 29.4, 29.3, 26.1, 26.0, 21.0, 20.9, 20.8, 20.7, 20.6, 20.5, 17.5; ESI-MS 840.2 $(M + H)^+$; HRMS (ESI): calcd for $C_{43}H_{52}N_3O_{11}FCl^+$, 840.3274; found 840.3272.

2-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)-7-methoxyquinazolin-6-yloxy)ethyl 4-O-(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)-2,3,6-Tri-O-acetyl-β-D-glucopyranoside (38a). m.p. 105-108 °C; ^{1}H NMR ($CDCl_3$, 600 MHz): δ 8.58 (s, 1H, ArH), 8.45 (br, s, 1H, NH), 7.71-7.70 (d, *J* = 2.3 Hz, 1H, ArH), 7.62-7.60 (dd, *J* = 5.5, 2.3 Hz, 1H, ArH), 7.41 (s,

1H, ArH), 7.38-7.35 (m, 1H, ArH), 7.24-7.21 (m, 3H, ArH), 7.04-7.02 (t, *J* = 5.5 Hz, 1H, ArH), 6.98-6.97 (d, *J* = 8.7 Hz, 1H, ArH), 5.36-5.35 (d, *J* = 2.8 Hz, 1H), 5.25-5.22 (t, *J* = 5.5 Hz, 1H), 5.16 (s, 2H), 5.14-5.11 (m, 2H), 5.01-4.95 (m, 2H), 4.84-4.83 (d, *J* = 10.1 Hz, 1H), 4.62-4.61 (d, *J* = 7.8 Hz, 1H), 4.56-4.54 (d, *J* = 8.3 Hz, 1H), 4.39-4.36 (m, 1H), 4.18-4.13 (m, 2H), 4.09-4.04 (m, 2H), 3.98 (s, 3H, -OMe), 3.95-3.92 (m, 1H), 3.90-3.89 (t, *J* = 3.7 Hz, 1H), 3.84-3.80 (t, *J* = 9.3 Hz, 1H), 3.62-3.60 (m, 1H), 2.16 (s, 3H, -OAc), 2.08 (s, 3H, -OAc), 2.06 (s, 3H, -OAc), 2.05 (s, 3H, -OAc), 2.04 (s, 3H, -OAc), 1.99 (s, 3H, -OAc), 1.98 (s, 3H, -OAc); ^{13}C NMR ($CDCl_3$, 150 MHz): δ 171.6, 170.5, 170.4, 170.3, 170.2, 169.5, 169.1, 157.0, 155.4, 153.5, 150.8, 148.8, 139.2, 135.3, 133.0, 130.3, 125.1, 124.8, 123.4, 122.5, 122.1, 114.9, 114.5, 114.1, 109.1, 107.3, 103.4, 101.7, 101.1, 75.8, 72.6, 72.5, 71.8, 70.9, 70.8, 70.5, 69.4, 69.3, 66.7, 61.0, 60.8, 58.5, 56.3, 21.3, 21.2, 21.1, 20.0, 20.9, 20.8, 20.7; ESI-MS 1087.6 (M + H)$^+$; HRMS (ESI): calcd for $C_{50}H_{56}N_3O_{21}FCl^+$, 1088.3079; found 1088.3059.

3-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)-7-methoxyquinazolin-6-yloxy)propyl 4-O-(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)-2,3,6-Tri-O-acetyl-β-D-glucopyranoside (39a). m.p. 94-97 °C; ^{1}H NMR ($CDCl_3$, 600 MHz): δ 8.59 (s, 1H, ArH), 8.33 (br, s, 1H, NH), 7.71 (s, 1H, ArH), 7.69-7.67 (d, *J* = 9.1 Hz, 1H, ArH), 7.39-7.36 (m, 1H, ArH), 7.33 (s, 1H, ArH), 7.28-7.27 (d, *J* = 1.4 Hz, 1H, ArH), 7.25-7.21 (m, 2H, ArH), 7.04-7.01 (t, *J* = 8.7 Hz, 1H, ArH), 6.99-6.97 (d, *J* = 9.2 Hz, 1H, ArH), 5.35-5.34 (d, *J* = 3.2 Hz, 1H), 5.25-5.22 (t, *J* = 8.7 Hz, 1H), 5.15 (s, 2H), 5.13-5.10 (m, 3H), 4.98-4.96 (dd, *J* = 10.1, 1.9 Hz, 1H), 4.93-4.91 (t, *J* = 8.2 Hz, 1H), 4.59-4.57 (d, *J* = 11.9 Hz, 1H), 4.50-4.49 (d, *J* = 7.7 Hz, 2H), 4.23-4.20 (m, 1H), 4.16-4.12 (m, 2H), 4.10-4.07 (m, 1H), 3.99 (s, 3H, -OMe), 3.89-3.87 (t, *J* = 6.8 Hz, 1H), 3.80-3.77 (t, *J* = 8.8 Hz, 2H), 3.62-3.59 (m, 1H), 2.20-2.18 (m, 1H), 2.16 (s, 3H, -OAc), 2.13-2.11 (m, 1H), 2.09 (s, 3H, -OAc), 2.04(s, 9H, -OAc), 1.99 (s, 3H, -OAc), 1.97 (s, 3H, -OAc); ^{13}C NMR ($CDCl_3$, 150 MHz): δ 171.0, 170.5, 170.4, 170.3, 170.2, 169.8, 169.1, 156.8, 155.1, 153.3, 150.7, 148.8, 146.8, 135.3, 133.2, 130.3, 125.1, 124.6, 123.3, 122.6, 122.0, 114.9, 114.5, 114.1, 109.1, 107.3, 101.4, 100.8, 100.7, 76.2, 72.9, 72.4, 72.2, 70.9, 70.8, 70.6, 69.6, 66.8, 66.6, 66.0, 61.6, 60.8, 56.3, 32.3, 21.1, 21.0, 20.9, 20.8, 20.7, 20.6, 20.5; ESI-MS 1101.6 (M + H)$^+$; HRMS (ESI): calcd for $C_{51}H_{58}N_3O_{21}FCl^+$, 1102.3235; found 1102.3241.

General Procedure for the Synthesis of 20a-39a. A suspension of 4-phenylamino-quinazoline derivatives (**10a-10d**, 1 mmol) and potassium carbonate (276.5 mg, 2 mmol) in dry DMF (30 mL) was stirred at room temperature for 20 min. Subsequently, the appropriately substituted sugar (**10-19**, 1.5 mmol) was added. The resulting reaction mixture was stirred at 80℃ for 8 h under N_2 atmosphere. After completion of the reaction, the solvent was removed under reduced pressure. The crude product was purified by chromatography on silica gel to yield the compounds **20a-39a**.

General Procedure for the Synthesis of 20-39. To a stirred solution of intermediates **(20a-39a** 1 mmol) in methanol (30 mL) was added CH_3ONa in CH_3OH (0.63 M, 1 mL). The reaction mixture was stirred at room temperature for 6 h until no starting material was

detected by TLC. After completion of the reaction, the reaction mixture was acidified to pH 6 by an addition of Amberlite (H^+) ion exchange resin. After removed the resin by filtration, the solvent collected was evaporated under reduced pressure to provide the target compounds **20-39.**

General Procedure for the Synthesis of 40-43. To a solution of quinazoline glycoside derivatives (**20**, **26**, **30** and **36**, 0.29 mmol), anhydrous calcium sulfate (120 mg) and 2-ethoxypropene (800 mg, 9.28 mmol) in dried DMF (30 mL) was added TsOH (10 mg). After stirring at 30℃ for 3 h, the mixture was neutralized with Et_3N and concentrated under vacuum. The resulting residue was purified by column chromatography on silica gel (1:2 ethyl acetate–acetone) to yield the compounds **40-43**.

2-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)quinazolin-6-yloxy)ethyl β-D-glucopyranoside (20). m.p. 117-119 °C; ^{1}H-NMR (DMSO-d_6, 600 MHz): δ 9.64 (br s, 1H, NH), 8.51 (s, 1H, ArH), 8.01 (d, *J* = 2.3 Hz, 1H, ArH), 7.93-7.92 (d, *J* = 1.9 Hz, 1H, ArH), 7.75-7.73 (d, *J* = 9.2 Hz, 1H, ArH), 7.55-7.53 (dd, *J* = 9.2, 2.3 Hz, 2H, ArH), 7.48-7.47 (d, *J* = 6.0 Hz, 1H, ArH), 7.37-7.31 (m, 3H, ArH), 7.20-7.16 (t, *J* = 6.8 Hz, 1H, ArH), 5.26 (s, 2H), 5.11 (br, s, 1H), 5.00 (br, s, 1H), 4.96-4.95 (d, *J* = 5.0 Hz, 1H)，4.56 (br, s, 1H), 4.40-4.32 (m, 4H), 4.22-4.18 (m, 1H), 3.93-3.91 (t, *J* = 5.5 Hz, 1H), 3.71-3.69 (d, *J* = 10.6 Hz, 1H), 3.17-3.15 (m, 2H), 3.12-3.08 (m, 1H), 3.04-3.01 (m, 1H); ^{13}C NMR (DMSO-d_6, 150 MHz): δ δ157.4, 157.1, 152.9, 150.2, 145.3, 140.3, 133.8, 131.2, 129.9, 124.8, 124.6, 123.9, 122.8, 121.6, 116.1, 115.3, 115.2, 114.9, 114.7, 114.5, 103.7, 77.5, 77.3, 74.0, 70.6, 70.0, 68.5, 67.5, 61.7; ESI-MS 602.3 $(M + H)^+$; HRMS (ESI): calcd for $C_{29}H_{30}N_3O_8FCl^+$, 602.1705; found 602.1723.

3-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)quinazolin-6-yloxy)propyl β-D-glucopyranoside (21). m.p. 115-117 °C; ^{1}H NMR (DMSO-d_6, 600 MHz): δ 9.63 (br, s, 1H, NH), 8.50 (s, 1H, ArH), 8.01 (d, *J* = 2.3 Hz, 1H, ArH), 7.91-7.90 (d, *J* = 1.8 Hz, 1H, ArH), 7.78-7.74 (m, 2H, ArH), 7.52-7.51 (dd, *J* = 9.2, 2.3 Hz, 1H, ArH), 7.49-7.48 (d, *J* = 5.9 Hz, 1H, ArH), 7.35-7.34 (m, 2H, ArH), 7.29-7.27 (d, *J* = 8.7 Hz, 1H, ArH), 7.21-7.18 (m, 1H, ArH), 5.26 (s, 2H), 5.05 (br, s, 1H), 4.98 (br, s, 1H), 4.94 (br, s, 1H)，4.54 (br, s, 1H), 4.39 (br, s, 1H), 4.28-4.25 (m, 2H), 4.21-4.19 (d, *J* = 7.8 Hz, 1H), 4.02-3.97 (m, 1H), 3.72-3.66 (m, 2H), 3.18-3.12 (m, 1H), 3.08-3.06 (m, 1H), 3.01-2.98 (t, *J* = 5.6 Hz, 1H), 2.11-2.09 (t, *J* = 6.4 Hz, 2H); ^{13}C NMR (DMSO-d_6, 150 MHz): δ 157.4, 157.3, 152.8, 150.1, 145.5, 140.3, 133.9, 131.1, 130.0, 124.6, 123.9, 122.8, 122.4, 121.6, 116.3, 115.3, 115.2, 114.9, 114.7, 114.5, 103.6, 77.4, 77.3, 74.0, 70.6, 70.0, 66.0, 61.6, 56.6; 13C NMR：δ156.7, 155.1, 153.0, 148.9, 147.0, 137.2, 124.2, 123.0, 119.4, 119.2, 117.2, 117.0, 109.3, 107.5, 104.4, 103.2, 81.4, 76.1, 75.6, 75.4, 73.8, 71.1, 68.7, 66.5, 66.1, 61.1, 61.0, 56.6, 56.5, 29.8; ESI-MS 616.2 $(M + H)^+$; HRMS (ESI): calcd for $C_{30}H_{32}N_3O_8FCl^+$, 616.1862; found 616.1834.

2-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)quinazolin-6-yloxy)ethyl α-L-rhamnopyranoside (22). m.p. 112-115 °C; ^{1}H NMR (DMSO-d_6, 600 MHz): δ 9.66 (br, s, 1H, NH), 8.52 (s, 1H, ArH), 8.01 (d, *J* = 2.3 Hz, 1H, ArH), 7.93-7.92 (d, *J* = 2.3 Hz, 1H, ArH),

7.75-7.73 (d, *J* = 9.1 Hz, 2H, ArH), 7.53-7.52 (dd, *J* = 9.1, 2.7 Hz, 1H, ArH), 7.49-7.47 (m, 1H, ArH), 7.35-7.32 (t, *J* = 7.8 Hz, 2H, ArH), 7.30-7.28 (d, *J* = 9.1 Hz, 1H, ArH), 7.21-7.17 (dt, *J* = 9.1, 2.3 Hz, 1H), 5.27 (s, 2H), 4.82 (br, s, 2H), 4.71 (s, 1H), 4.62 (br, s, 1H)，4.31 (br, s, 2H), 3.52-3.49 (m, 1H), 3.48-3.44 (m, 1H), 3.25-3.22 (m, 1H), 3.23-3.21 (t, *J* = 9.1 Hz, 1H), 1.15-1.14 (d, *J* = 6.4 Hz, 3H); ^{13}C NMR (DMSO-d_6, 150 MHz): δ 163.6, 162.0, 157.4, 157.1, 152.8, 150.2, 145.1, 140.2, 133.7, 131.1, 129.7, 124.7, 123.9, 122.8, 121.6, 116.0, 115.3, 114.9, 114.5, 103.6, 100.7, 72.4, 71.2, 71.0, 69.9, 69.1, 68.3, 65.4, 18.5; ESI-MS 586.1 (M + H)$^+$; HRMS (ESI): calcd for $C_{29}H_{30}N_3O_7FCl^+$, 586.1756; found 586.1761.

3-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)quinazolin-6-yloxy)propyl α-L-rhamnopyranoside (23). m.p. 88-90 °C; ^{1}H NMR (DMSO-d_6, 600 MHz): δ 9.62 (br, s, 1H, NH), 8.50 (s, 1H, ArH), 8.02 (s, 1H, ArH), 7.91 (s, 1H, ArH), 7.76-7.72 (t, *J* = 10.1 Hz, 2H, ArH), 7.51-7.48 (t, *J* = 10.1 Hz, 2H, ArH), 7.35-7.32 (t, *J* = 10.5 Hz, 2H, ArH), 7.29-7.28 (d, *J* = 8.7 Hz, 1H, ArH), 7.20-7.19 (t, *J* = 7.3 Hz, 1H, ArH), 5.27 (s, 2H), 5.48 (br, s, 2H), 4.61 (s, 2H), 4.22 (br, s, 2H), 3.82-3.81 (d, *J* = 8.2 Hz, 1H), 3.64-3.58 (m, 2H), 3.45 (br, s, 2H), 3.20 (br, s, 1H), 2.08 (m, 2H), 1.11-1.10 (d, *J* = 6.0 Hz, 3H); ^{13}C NMR (DMSO-d_6, 150 MHz): δ 157.4, 157.2, 152.9, 150.1, 145.5, 140.3, 133.9, 131.1, 130.0, 124.6, 123.9, 122.8, 121.6, 116.1, 115.3, 115.2, 114.8, 114.7, 114.5, 103.4, 100.6, 72.5, 71.3, 71.1, 69.9, 69.1, 65.8, 63.4, 29.5, 18.4; ESI-MS 600.1 (M + H)$^+$; HRMS (ESI): calcd for $C_{30}H_{32}N_3O_7FCl^+$, 600.1913; found 600.1907.

2-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)quinazolin-6-yloxy)ethyl β-D-galactopyranoside (24). m.p. 102-104 °C; ^{1}H NMR (DMSO-d_6, 600 MHz): δ 9.79 (br s, 1H, NH), 8.56 (s, 1H, ArH), 8.01-8.00 (d, *J* = 2.8 Hz, 1H, ArH), 7.96 (s, 1H, ArH), 7.75-7.73 (dd, *J* = 8.7, 3.3 Hz, 2H, ArH), 7.57-7.56 (dd, *J* = 8.2, 2.3 Hz, 1H, ArH), 7.49-7.46 (q, *J* = 7.8 Hz, 1H, ArH), 7.35-7.32 (t, *J* = 7.8 Hz, 2H, ArH), 7.30-7.29 (d, *J* = 9.2 Hz, 1H, ArH), 9.20-7.19 (dt, *J* = 7.8, 2.2 Hz, 1H, ArH), 5.27 (s, 2H), 4.95 (br, s, 1H), 4.76 (br, s, 1H), 4.62 (br, s, 1H), 4.42 (br, s, 1H), 4.35-4.33 (m, 2H), 4.25-4.24 (d, *J* = 7.3 Hz, 1H), 4.20-4.17 (m, 1H), 3.94-3.92 (m, 1H), 3.67-3.66 (d, *J* = 2.3 Hz, 1H), 3.58-3.49 (m, 3H), 3.30-3.29 (m, 2H); ^{13}C NMR (DMSO-d_6, 150 MHz): δ 163.6, 162.0, 157.6, 157.3, 152.5, 150.4, 140.2, 133.5, 131.1, 125.0, 124.8, 123.9, 123.0, 121.6, 115.3, 115.2, 114.9, 114.7, 114.5, 104.3, 103.8, 75.9, 74.0, 71.1, 69.9, 68.7, 67.4, 61.0, 56.6; ESI-MS 602.3 (M + H)$^+$; HRMS (ESI): calcd for $C_{29}H_{30}N_3O_8FCl^+$, 602.1705; found 602.1706.

3-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)quinazolin-6-yloxy)propyl β-D-galactopyranoside (25). m.p. 110-112 °C; ^{1}H NMR (DMSO-d_6, 600 MHz): δ 9.76 (br, s, 1H, NH), 8.47 (s, 1H, ArH), 9.02-9.01 (d, *J* = 2.3 Hz, 1H, ArH), 7.94-7.93 (d, *J* = 2.3 Hz, 1H, ArH), 7.74-7.73 (d, *J* = 8.7 Hz, 1H, ArH), 7.71-7.70 (d, *J* = 7.6 Hz, 1H, ArH), 7.50-7.47 (m, 2H, ArH), 7.34-7.31 (t, *J* = 10.3 Hz, 2H, ArH), 7.28-7.26 (d, *J* = 9.2 Hz, 1H, ArH), 7.21-7.18 (t, *J* = 8.6 Hz, 1H, ArH), 5.26 (s, 2H), 5.03 (br, s, 1H), 4.89 (br, s, 1H), 4.70 (br, s, 1H), 4.54 (br, s, 1H), 4.37 (br, s, 1H), 4.28-4.21 (m, 2H), 4.14-4.13 (d, *J* = 7.3 Hz, 1H), 3.96-3.95 (m, 1H), 3.70-3.62 (m, 2H), 3.55-3.53 (m, 1H), 3.46-3.43 (m, 2H), 3.28-3.25 (m, 1H), 2.12-2.07

(m, 2H); ^{13}C NMR (DMSO-d_6, 150 MHz): δ 163.6, 162.0, 157.5, 157.2, 153.0, 149.9, 145.4, 140.2, 131.1, 129.9, 124.6, 123.9, 122.8, 121.6, 115.3, 115.2, 114.9, 114.7, 114.5, 104.2, 103.7, 75.8, 74.0, 71.2, 70.0, 68.6, 66.1, 65.8, 60.9, 29.9; ESI-MS 616.2 $(M + H)^+$; HRMS (ESI): calcd for $C_{30}H_{32}N_3O_8FCl^+$, 616.1862; found 616.1863.

9-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)quinazolin-6-yloxy)nonyl β-D-glucopyranoside (26). m.p. 83-85 °C; ^{1}H NMR (DMSO-d_6, 600 MHz): δ9.62 (br s, 1H, NH), 8.49 (s, 1H, ArH), 8.01 (d, *J* = 2.3 Hz, 1H, ArH), 7.88 (d, *J* = 2.3 Hz, 1H, ArH), 7.74-7.70 (m, 2H, ArH), 7.49-7.48 (m, 2H, ArH), 7.34-7.31 (m, 2H, ArH), 7.29-7.27 (d, *J* = 9.2 Hz, 1H, ArH), 7.20-7.16 (t, *J* = 7.9 Hz, 1H, ArH), 5.26 (s, 2H), 5.52-4.92 (m, 3H), 4.51 (br, s, 1H), 4.14-4.09 (m, 3H)，3.78-3.76 (m, 1H), 3.68-3.66 (d, *J* = 11.5 Hz, 1H), 3.46-3.44 (m, 2H), 3.15-3.12 (t, *J* = 8.8 Hz, 1H), 3.08-3.05 (m, 2H), 2.95-2.92 (t, *J* = 7.7 Hz, 1H), 1.83-1.78 (m, 2H), 1.53-1.50 (m, 2H), 1.47-1.45 (m, 2H), 1.38-1.36 (m, 2H), 1.32-1.27 (m, 6H); ^{13}C NMR: (DMSO-d_6, 150 MHz): δ 163.6, 162.0, 157.4, 152.8, 150.1, 145.4, 140.2, 134.0, 131.1, 130.0, 124.6, 123.9, 122.8, 121.6, 116.1, 115.3, 115.2, 114.8, 114.7, 114.5, 103.4, 77.4, 77.3, 74.0, 70.6, 69.9, 69.1, 68.8, 61.6, 29.9, 29.8, 29.6, 29.5, 26.2, 26.1, 19.1; ESI-MS 700.2 $(M + H)^+$; HRMS (ESI): calcd for $C_{36}H_{44}N_3O_8FCl^+$, 700.2801; found 700.2800.

9-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)quinazolin-6-yloxy)nonyl α-L-rhamnopyranoside (27). m.p. 55-57 °C; ^{1}H NMR (DMSO-d_6, 600 MHz): δ 9.65 (br s, 1H, NH), 8.49 (s, 1H, ArH), 8.02 (d, *J* = 2.3 Hz, 1H, ArH), 7.90-7.89 (d, *J* = 1.8 Hz, 1H, ArH), 7.75-7.74 (dd, *J* = 9.1, 2.3 Hz, 1H, ArH), 7.72-7.71 (d, *J* = 9.1 Hz, 1H, ArH), 7.49-7.47 (m, 2H, ArH), 7.35-7.32 (m, 2H, ArH), 7.28-7.27 (d, *J* = 9.2 Hz, 1H, ArH), 7.21-7.18 (t, *J* = 9.9 Hz, 1H, ArH), 5.26 (s, 2H), 4.92 (br, s, 2H), 4.53 (s, 1H), 4.14-4.12 (t, *J* = 6.4 Hz, 2H), 3.59 (br, s, 1H), 3.55-3.51 (m, 1H), 3.46-3.37 (m, 3H), 3.32-3.18 (m, 1H), 3.20-3.18 (t, *J* = 9.2 Hz, 1H), 1.80-1.79 (m, 2H), 1.49-1.46 (m, 4H), 1.36-1.34 (m, 2H), 1.34-1.28 (m, 6H), 1.14-1.12 (d, *J* = 5.9 Hz, 3H); ^{13}C NMR: (DMSO-d_6, 150 MHz): δ157.4, 152.8, 150.1, 145.4, 140.2, 133.9, 131.1, 130.0, 124.8, 124.6, 123.9, 122.8, 121.6, 116.1, 115.3, 115.2, 114.8, 114.7, 114.5, 103.4, 100.6, 72.5, 71.3, 71.1, 69.9, 69.0, 68.9, 66.9, 29.6, 29.5, 29.3, 29.2, 29.1, 26.3, 26.2, 18.5; ESI-MS 684.2 $(M + H)^+$; HRMS (ESI): calcd for $C_{36}H_{44}N_3O_7FCl^+$, 684.2852; found 684.2844.

2-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)quinazolin-6-yloxy)ethyl 4-O-(β-D-galactopyranosyl)-β-D-glucopyranoside (28). m.p. 144-146 °C; ^{1}H NMR (DMSO-d_6, 600 MHz): 9.64 (br, s, 1H, NH), 8.15 (s, 1H, ArH), 8.02-8.01 (d, *J* = 2.7 Hz, 1H, ArH), 7.93-7.92 (d, *J* = 2.3 Hz, 1H, ArH), 7.76-7.73 (t, *J* = 5.0 Hz, 2H, ArH), 7.55-7.53 (dd, *J* = 9.2, 2.8 Hz, 1H), 7.48-7.46 (q, *J* = 5.9 Hz, 1H, ArH), 7.35-7.32 (t, *J* = 7.8 Hz, 2H, ArH), 7.30-7.28 (d, *J* = 9.2 Hz, 1H, ArH), 7.21-7.18 (dt, *J* = 8.8, 2.8 Hz, 1H, ArH), 5.29-5.28 (m, 1H), 5.27 (s, 2H), 5.14-5.13 (d, *J* = 4.1 Hz, 1H), 4.83 (br, s, 1H), 4.74 (br, s, 1H), 4.69 (br, s, 1H), 4.63 (br, s, 1H), 4.56-4.55 (d, *J* = 3.7 Hz, 1H), 4.38-4.37 (d, *J* = 7.8 Hz, 2H), 4.35-4.31 (m, 2H), 4.23-4.20 (m, 2H), 3.96-3.92 (m, 1H), 3.79-3.78 (d, *J* = 9.2 Hz, 1H), 3.65-3.63 (d, *J* = 11.0 Hz, 2H), 3.55-3.43 (m, 7H), 3.10-3.08 (t, *J* = 7.8 Hz, 1H); ^{13}C NMR (DMSO-d_6, 150 MHz): δ 157.4,

157.1, 152.8, 150.2, 145.2, 140.2, 133.8, 131.2, 129.9, 124.6, 123.9, 122.8, 121.6, 116.1, 115.3, 115.2, 114.9, 114.7, 114.5, 104.5, 103.4, 103.3, 81.3, 76.1, 75.6, 75.5, 73.8, 73.7, 71.1, 69.9, 68.7, 68.5, 67.7, 61.0, 56.6; ESI-MS 764.3 $(M + H)^+$; HRMS (ESI): calcd for $C_{35}H_{40}N_3O_{13}FCl^+$, 764.2234; found 764.2222.

3-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)quinazolin-6-yloxy)nonyl 4-O-(β-D-galactopyranosyl)-β-D-glucopyranoside (29). m.p. 140-142 °C; ^{1}H NMR (DMSO-d_6, 600 MHz): δ 9.66 (br, s, 1H, NH), 8.49 (s, 1H, ArH), 8.02-8.01 (d, *J* = 2.3 Hz, 1H, ArH), 7.91 (d, *J* = 2.3 Hz, 1H, ArH), 7.75-7.72 (m, 2H, ArH), 7.52-7.50 (dd, *J* = 9.1, 2.7 Hz, 1H, ArH), 7.49-7.47 (t, *J* = 5.9 Hz, 1H, ArH), 7.35-7.33 (t, *J* = 7.8 Hz, 2H, ArH), 7.29-7.27 (d, *J* = 9.1 Hz, 1H), 7.21-7.18 (dt, *J* = 8.7, 2.7 Hz, 1H, ArH), 5.26 (s, 2H), 5.23 (br, s, 1H), 5.19 (br, s, 1H), 4.89 (br, s, 1H), 4.73 (s, 1H), 4.71 (d, *J* = 3.7 Hz, 1H), 4.60 (br, s, 2H), 4.39 (br, s, 1H), 4.28-4.25 (m, 4H), 4.00-3.98 (m, 1H), 3.75-3.68 (m, 2H), 3.62-3.59 (m, 2H), 3.55-3.44 (m, 6H), 3.07-3.05 (t, *J* = 7.8 Hz, 1H), 2.11-2.09 (m, 2H); ^{13}C NMR (DMSO-d_6, 150 MHz): δ 157.4, 157.2, 152.9, 150.1, 145.5, 140.2, 133.9, 131.2, 129.9, 124.8, 123.9, 122.8, 121.6, 116.1, 115.3, 115.2, 114.9, 114.7, 114.5, 104.4, 103.6, 103.2, 81.4, 79.7, 76.1, 75.6, 75.4, 73.8, 73.7, 71.1, 70.0, 68.7, 66.1, 60.9, 56.6; ESI-MS 778.3 $(M + H)^+$; HRMS (ESI): calcd for $C_{36}H_{42}N_3O_{13}FCl^+$, 778.2390, found 778.2376.

2-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)-7-methoxyquinazolin-6-yloxy)ethyl β-D-glucopyranoside (30). m.p. 121-124 °C; ^{1}H NMR (DMSO-d_6, 600 MHz): δ 9.52 (br, s, 1H, NH), 8.46 (s, 1H, ArH), 7.98-7.97 (d, *J* = 2.8 Hz, 1H), 7.84 (s, 1H, ArH), 7.72-7.70 (dd, *J* = 9.2, 2.3 Hz, 1H, ArH), 7.50-7.47 (q, *J* = 5.9 Hz, 1H, ArH), 7.35-7.31 (t, *J* = 7.8 Hz, 2H, ArH), 7.28-7.26 (d, *J* = 9.1 Hz, 1H, ArH), 7.19-7.18 (m, 2H, ArH), 5.25 (s, 2H), 5.17 (br, s, 3H), 4.64 (br, s, 1H), 4.34-4.31 (m, 3H), 4.24-4.19 (m, 1H), 3.96-3.95 (m, 1H), 3.94 (s, 3H, -OMe), 3.71-3.69 (d, *J* = 10.1 Hz, 1H), 3.51-3.48 (m, 1H), 3.20-3.25 (m, 2H), 3.10-3.08 (t, *J* = 8.7 Hz, 1H), 3.04-3.01 (t, *J* = 8.3 Hz, 1H); ^{13}C NMR (DMSO-d_6, 150 MHz): δ 156.8, 154.7, 153.4, 149.9, 148.5, 147.4, 140.3, 134.1, 131.1, 131.0, 124.4, 123.9, 122.6, 121.6, 115.2, 114.9, 114.7, 109.2, 107.9, 103.8, 103.1, 77.6, 77.3, 74.0, 70.6, 69.9, 69.0, 67.4, 61.6, 56.6; ESI-MS 632.3 $(M + H)^+$; HRMS (ESI): calcd for $C_{30}H_{32}N_3O_9FCl^+$, 632.1811; found 632.1807.

3-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)-7-methoxyquinazolin-6-yloxy)propyl β-D-glucopyranoside (31). m.p. 111-114 °C; ^{1}H NMR (DMSO-d_6, 600 MHz): δ 9.74 (br, s, 1H, NH), 8.52 (s, 1H, ArH), 7.93-7.92 (d, *J* = 2.2 Hz, 1H, ArH), 7.84 (s, 1H, ArH), 7.68-7.66 (d, *J* = 7.7 Hz, 1H, ArH), 7.49-7.46 (q, *J* = 7.7 Hz, 1H, ArH), 7.34-7.31 (t, *J* = 9.9 Hz, 2H), 7.28-7.27 (d, *J* = 8.8 Hz, 1H, ArH), 7.20-7.17 (m, 2H, ArH), 5.26 (s, 2H), 4.92 (br, s, 2H), 4.51 (br, s, 1H), 4.24-4.23 (d, *J* = 7.7 Hz, 2H), 4.21-4.19 (d, *J* = 7.7 Hz, 1H), 3.99-3.97 (m, 1H), 3.94 (s, 3H, -OMe), 3.70-3.67 (m, 2H), 3.47-3.45 (m, 2H), 3.15-3.12 (m, 2H), 3.08-3.06 (t, *J* = 8.8 Hz, 1H), 3.00-2.98 (t, *J* = 8.8 Hz, 1H), 2.12-2.08 (m, 2H); ^{13}C NMR (DMSO-d_6, 150 MHz): δ 163.6, 161.9, 157.1, 155.3, 152.6, 150.4, 149.0, 140.2, 133.5, 131.1, 125.0, 123.9, 123.2, 121.6, 115.3, 115.2, 114.8, 114.7, 114.5, 109.0, 103.6, 77.4, 77.3, 74.1, 70.6,

70.0, 66.6, 66.0, 61.6, 56.5, 29.8; ESI-MS 646.3 $(M + H)^+$; HRMS (ESI): calcd for $C_{31}H_{34}N_3O_9FCl^+$, 646.1968; found 646.1986.

2-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)-7-methoxyquinazolin-6-yloxy)ethyl α-L-rhamnopyranoside (32). m.p. 1031-106 °C; ^{1}H NMR (DMSO-d_6, 600 MHz): δ 8.43 (br, s, 1H, NH), 8.47-8.46 (d, *J* = 4.6 Hz, 1H, ArH), 7.97-7.96 (d, *J* = 2.3 Hz, 1H, ArH), 7.83 (s, 1H, ArH), 7.71-7.70 (dd, *J* = 8.7, 2.3 Hz, 1H, ArH), 7.49-7.46 (q, *J* = 7.8 Hz, 1H, ArH), 7.35-7.32 (t, *J* = 9.2 Hz, 2H, ArH), 7.28-7.26 (t, *J* = 4.6 Hz, 1H, ArH), 7.19 (s, 2H, ArH), 5.26 (s, 2H), 4.82-4.80 (m, 2H), 4.71 (s, 1H), 4.61 (br, s, 1H), 4.30-4.29 (s, 2H), 4.00-3.96 (m, 1H), 3.94 (s, 3H, -OMe), 3.86-3.84 (m, 1H), 3.65 (s, 1H), 3.53-3.52 (m, 1H), 3.46-3.45 (m, 1H), 3.22-3.21 (m, 1H), 1.15-1.14 (d, *J* = 5.9 Hz, 3H); ^{13}C NMR (DMSO-d_6, 150 MHz): δ 161.9, 156.7, 154.9, 153.4, 150.0, 148.5, 147.5, 140.2, 134.1, 131.1, 124.5, 123.9, 122.6, 121.6, 115.2, 114.9, 114.7, 109.2, 107.9, 103.2, 100.6, 72.4, 71.2, 71.0, 69.9, 69.1, 68.7, 65.1, 56.4, 18.5; ESI-MS 616.1 $(M + H)^+$; HRMS (ESI): calcd for $C_{30}H_{32}N_3O_8FCl^+$, 616.1862; found 616.1847.

3-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)-7-methoxyquinazolin-6-yloxy)propyl α-L-rhamnopyranoside (33). m.p. 111-113 °C; ^{1}H NMR (DMSO-d_6, 600 MHz): δ 9.52 (br, s, 1H, NH), 8.41 (s, 1H, ArH), 7.96-7.94 (t, *J* = 5.0 Hz, 1H, ArH), 7.82 (s, 1H, ArH), 7.67-7.66 (dd, *J* = 8.7, 1.8 Hz, 1H, ArH), 7.48-7.46 (q, *J* = 7.7 Hz, 1H, ArH), 7.35-7.31 (t, *J* = 7.8 Hz, 2H, ArH), 7.25-7.24 (d, *J* = 9.2 Hz, 1H, ArH), 7.21-7.20 (m, 1H, ArH), 7.15 (s, 1H, ArH), 5.24 (s, 2H), 4.79 (br, s, 2H), 4.65 (br, s, 1H), 4.59 (s, 1H), 4.20-4.18 (t, *J* = 6.4 Hz, 2H), 3.93 (s, 3H, -OMe), 3.82-3.80 (m, 1H), 3.63-3.62 (d, *J* = 1.8 Hz, 1H), 3.54-2.52 (m, 1H), 3.45-3.43 (m, 2H), 3.20-3.18 (t, *J* = 9.6 Hz, 1H), 2.08-2.06 (m, 2H), 1.11-1.10 (d, *J* = 5.9 Hz, 3H); ^{13}C NMR (DMSO-d_6, 150 MHz): δ 156.9, 154.7, 153.6, 149.6, 148.5, 147.3, 140.3, 131.1, 131.0, 124.6, 123.9, 122.8, 121.5, 115.3, 115.2, 114.9, 114.6, 114.5, 107.7, 103.4; ESI-MS 630.2 $(M + H)^+$; HRMS (ESI): calcd for $C_{31}H_{34}N_3O_8FCl^+$, 630.2018; found 630.2013.

2-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)-7-methoxyquinazolin-6-yloxy)ethyl β-D-galactopyranoside (34). m.p. 117-119 °C; ^{1}H NMR (DMSO-d_6, 600 MHz): δ 9.51 (br, s, 1H, NH), 8.48 (s, 1H, ArH), 7.96-7.95 (d, *J* = 3.3 Hz, 1H, ArH), 7.82 (s, 1H, ArH), 7.71-7.69 (dd, *J* = 8.8, 2.2 Hz, 1H, ArH), 7.48-7.46 (q, *J* = 6.6 Hz, 1H, ArH), 7.35-7.31 (t, *J* = 9.9 Hz, 2H), 7.28-7.27 (d, *J* = 8.8 Hz, 1H, ArH), 7.20-7.18 (m, 2H, ArH), 5.26 (s, 2H), 4.96 (br, s, 1H), 4.76 (br, s, 1H), 4.62 (br, s, 1H), 4.43 (br, s, 1H), 4.35-4.30 (m, 2H), 4.27-4.26 (d, *J* = 7.7 Hz, 1H), 4.20-4.17 (m, 1H), 3.94 (s, 3H, -OMe), 3.92-3.91 (m, 1H), 3.66 (br, s, 1H), 3.58-3.55 (m, 2H), 3.42-3.37 (m, 2H), 3.32-3.30 (m, 1H); ^{13}C NMR (DMSO-d_6, 150 MHz): δ 163.6, 162.0, 156.8, 154.9, 153.2, 150.1, 148.6, 146.9, 140.2, 134.0, 131.1, 124.6, 123.9, 122.7, 121.6, 115.2, 114.7, 109.1, 107.6, 104.4, 103.1, 75.9, 74.0, 71.0, 70.0, 69.0, 68.7, 67.3, 61.0, 56.4; ESI-MS 632.2 $(M + H)^+$; HRMS (ESI): calcd for $C_{30}H_{32}N_3O_9FCl^+$, 632.1811; found 632.1829.

3-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)-7-methoxyquinazolin-6-yloxy)propyl β-D-galactopyranoside (35). m.p. 118-121 °C; ^{1}H-NMR (DMSO-d_6, 600 MHz): δ 9.49 (br, s, 1H, NH), 8.45 (s, 1H, ArH), 7.97-7.96 (d, *J* = 2.3 Hz, 1H, ArH), 7.82 (s, 1H, ArH), 7.71-7.69

(dd, *J* = 9.2, 2.8 Hz, 1H, ArH), 7.48-7.46 (q, *J* = 6.4 Hz, 1H, ArH), 7.35-7.31 (t, *J* = 7.7 Hz, 2H, ArH), 7.28-7.26 (d, *J* = 9.2 Hz, 1H, ArH), 7.21-7.18 (m, 2H, ArH), 5.25 (s, 2H), 4.86 (br, s, 1H), 4.72 (br, s, 1H), 4.58 (br, s, 1H), 4.38 (br, s, 1H), 4.28-4.22 (m, 2H), 4.15-4.14 (d, *J* = 7.3 Hz, 1H), 3.97-3.96 (m, 1H), 3.94 (s, 3H, -OMe), 3.71-3.68 (m, 1H), 3.64 (br, s, 1H), 3.55-3.52 (m, 1H), 3.49-3.42 (m, 2H), 3.30-3.27 (m, 2H), 2.12-2.10 (m, 2H); ^{13}C NMR (DMSO-d_6, 150 MHz): δ 156.8, 154.9, 153.4, 150.0, 148.8, 147.4, 134.1, 131.1, 124.5, 123.9, 122.7, 121.6, 115.3, 115.2, 114.9, 114.7, 109.3, 109.3, 107.8, 103.2, 99.9, 75.7, 74.0, 71.2, 70.0, 68.7, 66.6, 56.9, 61.0, 56.4, 29.9; ESI-MS 646.2 $(M + H)^+$; HRMS (ESI): calcd for $C_{31}H_{34}N_3O_9FCl^+$, 646.1968; found 646.1962.

9-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)-7-methoxyquinazolin-6-yloxy)nonyl β-D-glucopyranoside (36). m.p. 84-85 °C; ^{1}H NMR (DMSO-d_6, 600 MHz): δ 9.43 (br s, 1H, NH), 8.45 (s, 1H, ArH), 7.96-7.95 (d, *J* = 2.3 Hz, 1H, ArH), 7.79 (s, 1H, ArH), 7.71-7.69 (dd, *J* = 8.7, 2.3 Hz, 1H, ArH), 7.48-7.46 (q, *J* = 6.4 Hz, 1H, ArH), 7.37-7.31 (t, *J* = 7.8 Hz, 2H, ArH), 7.27-7.26 (d, *J* = 8.7 Hz, 1H, ArH), 7.21-7.18 (m, 2H, ArH), 5.25 (s, 2H), 4.99-4.98 (d, *J* = 4.6 Hz, 1H), 4.96 (br, s, 1H), 4.93 (br, s, 1H), 4.51-4.50 (t, *J* = 5.5 Hz, 1H), 4.13-4.10 (m, 3H), 3.94 (s, 3H, -OMe), 3.77-3.76 (m, 1H), 3.68-3.66 (m, 1H), 3.46-3.42 (m, 2H), 3.15-3.12 (t, *J* = 6.8 Hz, 1H), 3.10-3.04 (m, 2H), 3.96-3.94 (m, 1H), 1.85-1.80 (m, 2H), 1.53-1.51 (m, 2H), 1.48-1.45 (m, 2H), 1.37-1.35 (m, 2H), 1.34-1.28 (m, 6H); ^{13}C NMR: (DMSO-d_6, 150 MHz): δ 156.7, 154.9, 153.3, 150.0, 148.8, 147.3, 140.2, 134.1, 131.1, 124.6, 123.9, 122.7, 121.6, 115.2, 114.9, 114.7, 114.5, 109.3, 107.8, 103.4, 103.0, 77.4, 77.3, 74.0, 70.6, 69.9, 69.3, 69.1, 61.6, 56.4,, 29.7, 29.6, 29.5, 29.3, 29.2, 26.2, 26.1; ESI-MS 730.2 $(M + H)^+$; HRMS (ESI): calcd for $C_{37}H_{46}N_3O_9FCl^+$, 730.2907; found 730.2896.

9-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)-7-methoxyquinazolin-6-yloxy)nonyl α-L-rhamnopyranoside (37). m.p. 79-81 °C; ^{1}H NMR (DMSO-d_6, 600 MHz): δ 9.45 (br s, 1H, NH), 8.45 (s, 1H, ArH), 7.96-7.95 (d, *J* = 2.8 Hz, 1H, ArH), 7.80 (s, 1H, ArH), 7.71-7.69 (dd, *J* = 9.2, 2.8 Hz, 1H, ArH), 7.48-7.46 (q, *J* = 6.4 Hz, 1H, ArH), 7.35-7.31 (t, *J* = 7.3 Hz, 2H, ArH), 7.27-7.26 (d, *J* = 9.2 Hz, 1H, ArH), 7.20-7.18 (m, 2H, ArH), 5.25 (s, 2H), 4.77 (br, s, 1H), 4.74 (br, s, 1H), 4.58 (br, s, 1H), 4.53 (s, 1H), 4.13-4.11 (t, *J* = 6.3 Hz, 2H), 3.93 (s, 3H, -OMe), 3.59 (s, 1H), 3.55-3.52 (m, 1H), 3.45-3.38 (m, 2H), 3.33-3.30 (m, 1H), 3.20-3.17 (t, *J* = 9.1 Hz, 1H), 1.84-1.80 (m, 2H), 1.50-1.44 (m, 4H), 1.37-1.35 (m, 2H), 1.32-1.28 (m, 6H), 1.14-1.13 (d, *J* = 6.4Hz, 3H); ^{13}C-NMR (DMSO-d_6, 600 MHz): δ 156.8, 154.9, 149.9, 148.8, 147.3, 140.3, 134.1, 131.1, 124.6, 123.9, 122.8, 121.5, 115.3, 115.2, 114.8, 114.7, 114.5, 109.3, 107.8, 103.0, 100.5, 72.5, 71.3, 71.1, 69.9, 69.3, 69.0, 66.9, 56.4, 29.6, 29.5, 29.4, 29.0, 28.9, 26.3, 26.2, 18.5; ESI-MS 714.0 $(M + H)^+$; HRMS (ESI): calcd for $C_{37}H_{46}N_3O_8FCl^+$, 714.2957; found 714.2975.

2-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)-7-methoxyquinazolin-6-yloxy)ethyl 4-O-(β-D-galactopyranosyl)-β-D-glucopyranoside (38). m.p. 151-153 °C; ^{1}H NMR (DMSO-d_6, 600 MHz): δ9.64 (br s, 1H, NH), 8.51 (s, 1H, ArH), 7.95-7.94 (d, *J* = 2.8 Hz, 1H, ArH), 7.86 (s, 1H, ArH), 7.69-7.67 (dd, *J* = 8.7, 2.3 Hz, 1H, ArH), 7.48-7.46 (q, *J* = 5.9 Hz, 1H,

ArH), 7.34-7.31 (t, *J* = 7.8 Hz, 2H, ArH), 7.29-7.28 (d, *J* = 8.7 Hz, 1H, ArH), 7.20-7.19 (m, 2H, ArH), 5.31-5.28 (m, 1H), 5.26 (s, 2H), 5.11 (br, s, 1H), 4.81 (br, s, 1H), 4.73 (br, s, 1H), 4.67 (br, s, 1H), 4.63 (br, s, 1H), 4.54 (br, s, 1H), 4.39-4.31 (m, 5H), 4.22-4.21 (d, *J* = 6.9 Hz, 2H), 3.99-3.96 (m, 1H), 3.95 (s, 3H, -OMe), 3.77 (br, s, 1H), 3.62 (br, s, 2H), 3.55-3.50 (m, 3H), 3.43-3.41 (m, 3H), 2.09-2.07 (m, 1H), 2.13-2.11 (t, *J* = 6.4 Hz, 2H); ^{13}C NMR (DMSO-d_6, 150 MHz)： δ 161.9, 157.0, 155.1, 152.9, 150.3, 149.6, 148.7, 140.2, 133.6, 131.2, 131.1, 124.8, 123.9, 123.0, 121.6, 115.3, 115.2, 114.9, 114.5, 109.0, 103.4, 103.2, 81.3, 76.1, 75.6, 75.5, 75.4, 73.8, 73.7, 71.1, 69.9, 69.0, 68.7, 67.6, 61.0, 56.5; ESI-MS 794.3 $(M + H)^+$; HRMS (ESI): calcd for $C_{36}H_{42}N_3O_{14}FCl^+$, 794.2339; found 794.2341.

3-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)-7-methoxyquinazolin-6-yloxy)propyl 4-O-(β-D-galactopyranosyl)-β-D-glucopyranoside (39). m.p. 178-179 °C; ^{1}H NMR (DMSO-d_6, 600 MHz): δ9.55 (br s, 1H, NH), 8.47 (s, 1H, ArH), 7.95-7.94 (d, *J* = 2.7 Hz, 1H, ArH), 7.83 (s, 1H, ArH), 7.70-7.68 (dd, *J* = 9.2, 2.3 Hz, 1H, ArH), 7.50-7.46 (q, *J* = 6.4 Hz, 1H, ArH), 7.35-7.31 (t, *J* = 10.0 Hz, 2H, ArH), 7.28-7.27 (d, *J* = 9.2 Hz, 1H, ArH), 7.21-7.17 (m, 2H, ArH), 5.26 (s, 2H), 5.17-5.16 (d, *J* = 5.0 Hz, 1H), 5.11-5.10 (d, *J* = 4.1 Hz, 1H), 4.81-4.80 (d, *J* = 3.2 Hz, 1H), 4.70 (br, s, 1H), 4.67-4.65 (t, *J* = 5.0 Hz, 1H), 4.58-4.56 (t, *J* = 5.9 Hz, 1H), 4.54-4.53 (d, *J* = 4.1 Hz, 1H), 4.38-4.37 (t, *J* = 6.1 Hz, 1H), 4.28-4.22 (m, 3H), 4.21-4.19 (d, *J* = 7.3 Hz, 1H), 3.99-3.98 (m, 1H), 3.94 (s, 3H, -OMe), 3.76-3.74 (dt, *J* = 11.4, 4.6 Hz, 1H), 3.73-3.69 (m, 1H), 3.62-3.60 (m, 2H), 3.55-3.45 (m, 6H), 3.29-3.28 (m, 1H), 3.05-3.04 (m, 1H), 2.13-2.11 (t, *J* = 6.4 Hz, 2H); ^{13}C NMR (DMSO-d_6, 150 MHz)： δ 161.9, 156.9, 155.0, 153.3, 150.0, 148.8, 140.2, 133.9, 131.2, 124.7, 123.9, 122.8, 121.6, 115.3, 115.2, 114.9, 114.7, 114.5, 109.2, 107.5, 104.4, 103.2, 81.3, 76.1, 75.6, 75.4, 73.8, 71.1, 70.0, 68.7, 66.5, 66.1, 61.0, 60.9, 56.6, 56.4, 29.8; ESI-MS 808.4 $(M + H)^+$; HRMS (ESI): calcd for $C_{37}H_{44}N_3O_{14}FCl^+$, 808.2496; found 808.2474.

2-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)quinazolin-6-yloxy)ethyl 4,6-O-isopropylidene-β-D-glucopyranoside (40). m.p. 119-121℃; ^{1}H-NMR (DMSO-d_6, 600 MHz): δ 9.60 (br, s, 1H, NH), 8.50 (s, 1H, ArH), 8.02-8.00 (dd, *J* = 10.1, 2.4 Hz, 1H, ArH), 7.93-7.91 (dd, *J* = 7.8, 2.8 Hz, 1H, ArH), 7.76-7.72 (m, 2H, ArH), 7.53-7.47 (m, 2H, ArH), 7.35-7.31 (t, *J* = 7.8 Hz, 2H, ArH), 7.29-7.28 (d, *J* = 9.2 Hz, 1H, ArH), 7.21-7.17 (dt, *J* = 8.7, 2.3 Hz, 1H, ArH), 5.26 (s, 2H), 5.14-5.12 (dd, *J* = 9.1, 2.3 Hz, 1H), 5.03-5.02 (d, *J* = 5.5 Hz, 1H), 5.56-5.54 (t, *J* = 8.2 Hz, 1H), 4.36-4.30 (m, 4H), 3.96-3.93 (m, 1H), 3.70-3.66 (m, 1H), 3.46-3.44 (dd, *J* = 6.8, 5.0 Hz, 2H), 3.18-3.12 (m, 1H), 3.04-3.00 (m, 1H), 1.22 (s, 6H); ^{13}C NMR (DMSO-d_6, 150 MHz): δ 157.4, 157.2, 152.9, 150.1, 145.5, 140.2, 133.9, 131.1, 130.0, 124.6, 124.5, 123.9, 122.7, 121.6, 116.1, 115.3, 115.2, 114.9, 114.7, 114.5, 103.6, 99.7, 77.3, 75.9, 73.9, 70.8, 70.0, 68.5, 67.5, 61.1, 30.1, 25.3; ESI-MS 642.4 $(M + H)^+$; HRMS(ESI): calcd. for $C_{32}H_{34}N_3O_8FCl^+$, 642.2018, found 642.1990.

9-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)quinazolin-6-yloxy)nonyl 4,6-O-isopropylidene-β-D-glucopyranoside (41). m.p. 64-67 °C; ^{1}H NMR (DMSO-d_6, 600 MHz): δ 9.57 (br, s, 1H, NH), 8.49 (s, 1H, ArH), 8.00 (d, *J* = 2.3 Hz, 1H, ArH), 7.88 (d, *J* = 2.3 Hz,

1H, ArH), 7.75-7.73 (dd, *J*=9.2, 2.8 Hz, 1H, ArH), 7.72-7.71 (d, *J* = 9.2 Hz, 1H), 7.50-7.48 (m, 2H, ArH), 7.35-7.31 (t, *J* = 9.6 Hz, 2H, ArH), 7.29-7.27 (d, *J* = 9.2 Hz, 1H), 7.21-7.17 (dt, *J* = 8.3, 2.3 Hz, 1H, ArH), 5.26 (s, 2H), 5.00-4.97 (m, 3H), 4.13-4.10 (m, 3H), 3.69-3.67 (m, 1H), 3.66-3.64 (d, *J* = 10.6 Hz, 1H), 3.46-3.44 (t, *J* = 6.2 Hz, 1H), 3.19-3.18 (t, *J* = 7.3 Hz, 1H), 3.13-3.11 (m, 1H), 3.02-3.00 (m, 1H), 2.97-2.94 (m, 1H), 1.82-1.79 (m, 2H), 1.54-1.51 (m, 2H), 1.48-1.45 (m, 2H), 1.38-1.34 (m, 2H), 1.32-1.27 (m, 6H), 1.24 (s, 6H); ^{13}C NMR (DMSO-d_6, 150 MHz): δ 157.4, 152.8, 150.1, 145.5, 140.2, 133.9, 131.1, 130.0, 124.8, 124.6, 123.9, 122.8, 121.6, 116.1, 115.3, 115.2, 114.8, 114.7, 114.5, 103.4, 104.3, 99.7, 77.4, 75.8, 73.9, 70.8, 70.0, 69.0, 68.8, 55.6, 30.1, 29.9, 29.6, 29.4, 29.3, 29.2, 26.2, 26.2, 25.4; ESI-MS 740.3 $(M + H)^+$; HRMS (ESI): calcd for $C_{39}H_{48}N_3O_8FCl^+$, 740.3114; found 740.3114.

2-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)-7-methoxyquinazolin-6-yloxy)ethyl 4,6-O-isopropylidene-β-D-glucopyranoside (42). m.p. 102-104 °C; ^{1}H NMR (DMSO-d_6, 600 MHz): δ 8.34 (s, 1H, ArH), 8.14 (br, s, 1H, NH), 7.74 (s, 1H, ArH), 7.45 (s, 1H), 7.32-7.29 (q, *J* = 7.8 Hz, 1H, ArH), 7.18-7.14 (t, *J* = 8.2 Hz, 3H, ArH), 6.99-6.97 (t, *J* = 8.2 Hz, 1H, ArH), 6.82-6.81 (d, *J* = 7.8 Hz, 1H, ArH), 6.73 (br, s, 1H, ArH), 4.99 (s, 2H), 4.39 (br, s, 1H), 4.18 (br, s, 2H), 4.08 (br, s, 2H), 3.82 (br, s, 1H), 3.65-3.63 (m, 3H), 3.62-3.61 (m, 2H), 3.46-3.41 (m, 5H), 1.31 (s, 6H); ^{13}C NMR (DMSO-d_6, 150 MHz): δ 163.8, 162.2, 156.4, 154.7, 150.6, 147.9, 139.2, 132.8, 130.2, 130.1, 124.5, 122.9, 122.5, 121.9, 115.0, 114.8, 114.1, 113.9, 108.4, 106.5, 103.2, 100.5, 74.6, 73.6, 71.8, 70.3, 61.3, 58.4, 56.5, 55.9, 53.9, 24.9, 24.8; ESI-MS 672.2 $(M + H)^+$; HRMS (ESI): calcd for $C_{33}H_{36}N_3O_9FCl^+$, 672.2124; found 672.2127.

9-(4-(3-chloro-4-(3-fluorobenzyloxy)phenylamino)-7-methoxyquinazolin-6-yloxy)nonyl 4,6-O-isopropylidene-β-D-glucopyranoside (43). m.p. 71-73 °C; ^{1}H NMR (DMSO-d_6, 600 MHz): δ 9.42 (br, s, NH), 8.45 (s, 1H, ArH), 7.96-7.95 (d, *J* = 2.7 Hz, 1H, ArH), 7.78 (s, 1H, ArH), 7.71-7.69 (dd, *J* = 9.1, 2.7 Hz, 1H, ArH), 7.49-7.46 (q, *J* = 7.8 Hz, 1H, ArH), 7.35-7.31 (t, *J* = 9.8 Hz, 2H, ArH), 7.27-7.26 (d, *J* = 9.2 Hz, 1H, ArH), 7.20-7.18 (m, 2H, ArH), 5.25 (s, 2H), 5.00-4.97 (m, 3H), 4.13-4.10 (q, *J* = 7.7 Hz, 3H), 3.93 (s, 3H, -OMe), 3.68-3.62 (m, 2H), 3.47-3.45 (m, 1H), 3.21-3.18 (m, 1H), 3.14-3.10 (m, 1H), 3.01-2.98 (m, 1H), 2.96-2.93 (m, 1H), 1.83-1.80 (m, 2H), 1.53-1.51 (m, 2H), 1.48-1.46 (m, 2H), 1.37-1.34 (m, 2H), 1.34-1.26 (m, 6H), 1.24 (s, 6H); ^{13}C-NMR (DMSO-d_6, 150 MHz): δ 156.7, 154.9, 153.3, 150.0, 148.8, 147.3, 140.2, 134.1, 131.1, 124.6, 123.9, 122.8, 121.5, 115.3, 115.2, 114.8, 114.6, 114.5, 109.3, 107.8, 103.3, 99.7, 77.4, 75.8, 73.9, 70.8, 69.9, 69.3, 69.1, 56.4, 55.6, 30.2, 29.9, 29.6, 29.4, 29.3, 29.2, 26.2, 26.1, 25.4; ESI-MS 770.4 $(M + H)^+$; HRMS (ESI): calcd for $C_{40}H_{50}N_3O_9FCl^+$, 770.3220; found 770.3243.

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