Aptamer Based Biosensors for Tobramycin

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Table S1

Aptamer-based electrochemical sensors for tobramycin

Aptamer sequences (5'-3')	Linear range	LOD	Ref.
GAC TAG GCA CTA GTC	10-200 nM	5.13 nM	[1]
[mG] [mG] [mC] [mA] [mC] [mG] [mA] [mG] [mG] [mU] [mU] U [mA] [mG] [mC] [mU] [mA] [mC] [mA] [mC] [mU] [mC] [mG] [mU] [mG] [mC] [mC]	5-500 μM	5 μM	[2]
[mG] [mG] [mC] [mA] [mC] [mG] [mA] [mG] [mG] [mU] [mU] U [mA] [mG] [mC] [mU] [mA] [mC] [mA] [mC] [mU] [mC] [mG] [mU] [mG] [mC] [mC]	0.1-1000 μM	0.1 μM	[3]
GGCACGAGG UUUAGCUACACUCGUGCC	1-1 × 10^4 nM	0.49 nM	[4]
ACU UGG UUU AGG UAA UGA GU	0.02-10.7 nM	14 pM	[5]
GGCACGAGGUUUAGCUACACUCGUGCC	0.5-70 μM	0.326 μM	[6]
ACU UGG UUU AGG UAA UGA GU	2.14 × 10^{-5}-21.4 nM	4.28 fM	[7]
ACUU GGUU UAGG UAAU GAGU	2.14 × 10^{-4}-2.14 pM	0.15 fM	[8]
GAT AAA GAC TAG GCA CTA GTC CAC TAC CAA TAA TCC TAG TCT TTT ACA	5-1000 nM	3.51 nM	[9]
GGG ACT TGG TTT AGG TAA TGA GTC CC	0.1-500 nM	56 pM	[10]
GGG ACT TGG TTT AGG TAA TGA GTC CC	1.07 × 10^{-4}-10.7 nM	0.13 pM	[11]
GGG ACT TGG TTT AGG TAA TGA GTC CC	1.07 × 10^{-4}-2.14 nM	2.95 fM	[12]
GGG ACT TGG TTT AGG TAA TGA GTC CC	2.14×10^{-4}-10.7 nM	6.57 fM	[13]
GGG ACT TGG TTT AGG TAA TGA GTC CC	750 μM-10 mM	125 μM	[14]

Table S2

Aptamer-based photoelectrochemical sensors for tobramycin

Aptamer Sequences	Linear range (nM)	LOD (pM)	Ref.
ACU UGG UUU AGG UAA UGA GU (RNA)	0.02-107	0.012 nM	[15]
GGG ACT TGG TTT AGG TAA TGA GTC CC	0.002-107	0.71	[16]
AAT CTT GTT GGG ACT TGG TTT AGG TAA TGA GTC C	0.002-0.011	2.05	[17]
GGG ACT TGG TTT AGG TAA TGA GTC CC	0.01-10.69	4.28	[18]
GGG ACT TGG TTT AGG TAA TGA GTC CC	5-50	4.28	[19]

Table S3

DNA aptamer-based colorimetric sensors for tobramycin

DNA aptamer sequences	Linear range (nM)	LOD (nM)	Ref
CGT CGA CGG ATC CAT GGC ACG TTA TAG GTC GACG	100-1400	37.9	[20]
GGG ACT TGG TTT AGG TAA TGA GTC CC	40-200	23.3	[21]
GGG ACT TGG TTT AGG TAA TGA GTC CC	2.84–57.05 μM	5.3	[22]
$(A)_{15}$-$(T)_{10}$-GGG ACT TGG TTT AGG TAA TGA GTC CC	0.1-100	0.07	[23]
GA CTA GGC ACT AGT C	20-800	12.24	[24]
T1: CCTCGTACTGAATGCTTTTTTGGG ACTTGGTTTAGGTAATGAGTCCC T2: GGGACTTGGTTTAGGTAATGAGTC CCTTTTTTGCATTCAGTACGAGG	4-32 μM	1.16 μM	[25]
GACTAGGCACTAGTC	0.1-4(high-sensitivity) 1-50(low-sensitivity)	0.02 0.09	[26]

Table S4

DNA aptamer-based fluorescence sensor for tobramycin

DNA aptamer sequences	**Linear range**	**LOD**	**Ref.**
AAA AAA TCT TGT TGG GAC TTG GTT TAG GTA ATG AGT CCC	0.3-50 μM	17.37 nM	[27]
TG ACT CCA GGC ACT TAG TCA	0.5-30 nM	0.06 nM	[28]
TG ACT CCA GGC ACT TAG TCA	10-300 pM (sensor-ss) 5-30 pM (sensor-ds)	3.179 pM 1.542 pM	[29]
GAC TAG GCA CTA GTC	125 pM -2500 nM	92.87 pM	[30]
GGG ACT TGG TTT AGG TAA TGA GTC CC	21.4-385 nM	6.5 nM	[31]
GGG ACT TGG TTT AGG TAA TGA GTC CC	0.1-6 μM	0.063 μM	[32]
GGG ACT TGG TTT AGG TAA TGA GTC CC (SP1) GGG ACT TGG TTT AGG TAA TGA GTC CCG GGA CT(SP2) AGT CCC GGG ACT TGG TTT AGG TAA TGA GTC CC(SP3)	5×10^{-7}-300 μM	0.153 pM	[33]
GGG ACT TGG TTT AG (T1) AGG TAA TGA GTC CC (T2)	0.08-2 μM	21.86 nM	[34]

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