

Supplementary Table S1

The list of modifications and their respective Δm for mass spectrometric analysis

Modifications	Delta mass (Da)
Hexose (Hex)	162.05282
Carboxymethyl (CML)	58.00548
Carboxyethyl (CEL)	72.02113
Fructosyl-lysine (FL-1H ₂ O)	144.0423
Carbamidomethyl (CAM) Static modification	57.02146

Abbreviations: Mod-Modification, CS-Charge state, XC-Xcorr, RT-Retention time.

**List of AGE modified peptides of BSA in presence and absence of
Glucose and Tolbutamide (100uM)**

Native BSA

S. No	Peptide sequence	Mod	m/z	MH+	CS (+)	XC	RT (min)
1	K *QTALVELLK	K1-Hex	435.59366	1304.76642	3	2.22	18.61

Glycated BSA

S. No	Peptide sequence	Mod	m/z	MH+	CS (+)	XC	RT (min)
1	AFDE K *LFTFHAD I CTLPDTEK	K5-Hex, C14-CAM	665.81659	2660.24453	4	1.37	24.17
2	ATEEQL K *TVMENFVAFV D K	K7-Hex	787.72357	2361.15616	3	3.77	31.86
3	F K *DLGEEHF K	K2-Hex	471.22919	1411.67301	3	1.04	13.37
4	HLVDEPQNLI K *Q N C D QF E K	K11-Hex, C14-CAM	839.7359	2517.19315	3	3.97	17.93
5	KFWG K *YLYE I AR	K5-Hex	579.30872	1735.91159	3	2.67	20.77
6	K *QTALVELLK	K1-Hex	652.88733	1304.76738	2	2.72	20.16
7	L A K *EYEATLEE C C AK	K3-Hex, C12-CAM, C13-CAM	659.63263	1976.88333	3	2.46	14.33
8	LAKEYEATLEE C C AK*DDPH A C Y STV F DK	K15-Hex, C12-CAM, C13-CAM, C21-CAM	703.30908	3512.51630	5	3.03	18.29
9	L K *E C C DKPLLE K	K2-Hex, C4-CAM, C5-CAM	424.46375	1694.83315	4	1.78	11.65
10	L K *HLVDEPQNLI K	K2-Hex,	570.32043	1708.94675	3	2.05	16.24
11	LVNELTEFA K *T C VADESHAG C EK	K10-Hex, C12-CAM, C21-CAM	693.31927	2770.25527	4	3.41	21.15
12	SH C IAEVE K *DAIPENLPPLTADFAEDKD V C K	K9-CML, C3-CAM, C30-CAM	714.74445	3569.69312	5	4.11	22.6
13	SH C IAEVE K *DAIPENLPPLTADFAEDKD V C K	K9-Hex, C3-CAM,	919.18646	3673.72402	4	4.91	22.92

		C30-CAM					
14	SLHTLFGDEL CK *VASLR	K12-Hex, C11-CAM	527.77325	2108.07119	4	1.86	25.24
15	TC VADESHAG CEK *SLHTLFGDEL CK	K13-Hex, C2-CAM, C11-CAM, C24-CAM	757.33594	3026.32192	4	3.73	19.4
16	VHK * EC CHGDLLE C ADDRADLAK	K3-Hex, C5-CAM, C6-CAM, C13-CAM	555.64946	2774.21819	5	2.29	14.5
17	YNGV FQ EC CA ED K *G AC LLPK	K14-CML, C8-CAM, C9-CAM, C17-CAM	849.04419	2545.11802	3	2.42	20.04

TOL BSA

S. No	Peptide sequence	Mod	m/z	MH+	CS (+)	XC	RT (min)
1	AFDE K *LFTFHADI C TLPDTEK	K5-Hex, C14-CAM	665.81714	2660.24672	4	1.25	24.12
2	ATEEQL K *TVMENFVAFV D K	K7-Hex	787.72394	2361.15726	3	3.93	31.82
3	FK *DLGEEH F K	K2-Hex	471.22928	1411.67328	3	1.11	13.49
4	HLVDEPQNLIK* QN C DQ F EK	K11-Hex, C14-CAM	839.73535	2517.19150	3	4.01	17.92
5	KFWG K *YLYE I AR	K5-Hex	579.30896	1735.91233	3	2.52	20.97
6	K *FWG K *YLYE I AR	K1-FL-1H20, K5-CML	597.30981	1789.91489	3	1.32	21.33
7	K *QTALVELLK	K1-Hex	652.88739	1304.76750	2	2.8	19.83
8	K *QTALVELLK	K1-FL-1H20	429.59048	1286.75690	3	1.95	19.86
9	LAK*EYEATLEE CCA K	K3-Hex, C12-CAM, C13-CAM	659.63269	1976.88352	3	2.6	14.49
10	LAK*EYEATLEE CCA KDDPHAC Y STV F DK	K3-Hex, C12-CAM, C13-CAM, C21-CAM	703.30841	3512.51295	5	3.14	18.28
11	LAKEYEATLEE CCA K*DDPHAC Y STV F DK	K15-Hex, C12-CAM, C13-CAM, C21-CAM	703.30865	3512.51417	5	3.13	18.37

12	LK*ECCDKPLLEK	K2-Hex, C4-CAM, C5-CAM	424.4635	1694.83217	4	1.88	11.68
13	LK*HLVDEPQNLIK	K2-Hex	570.31964	1708.94437	3	1.84	16.24
14	LVNELTEFAK*TCVADESHAGCEK	K10-Hex, C12-CAM, C21-CAM	693.31995	2770.25796	4	3.56	21.16
15	RHPYFYAPELLYYANK*	K16-CML	526.51843	2103.05190	4	2.07	23.39
16	SHCIAEVEK*DAIPENLPPLTADFAEDKDVCCK	K9-CML, C3-CAM, C30-CAM	714.74609	3569.70136	5	3.82	22.64
17	SHCIAEVEK*DAIPENLPPLTADFAEDKDVCCK	K9-Hex, C3-CAM, C30-CAM	735.55029	3673.72236	4	4.57	23.04
18	SLHTLFGDELCK*VASLR	K12-Hex, C11-CAM	527.77307	2108.07046	4	1.8	25.27
19	TCVADESHAGCEK*SLHTLFGDELCK	K13-Hex, C2-CAM, C11-CAM, C24-CAM	757.33514	3026.31875	4	3.59	19.4
20	VHK*ECCHGDLLECADRADLAK	K3-Hex, C5-CAM, C6-CAM, C13-CAM	555.64917	2774.21674	5	2.69	14.49
21	YNGVFQECCQAEDK*GACLLPK	K14-CML, C8-CAM, C9-CAM, C17-CAM	849.0459	2545.12314	3	2.09	19.92