

# **Monodisperse magnetic mesoporous silica microspheres facilitate the studies of gastric cancer-specific peptides in sera**

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## Supplemental Tables

**Table S1: Quantitative peptidomic results by the current strategy (\*p<0.05)**

<b>Protein name</b>	<b>Peptide sequence</b>	<b>Mr (calc)</b>	<b>[d6]-/[d0] ratio</b>
<b>Fibrinogen <math>\alpha</math></b>	DEAGSEADHEGTHSTKRGHAKSRP	2559.18	1.20
	DSGEGDFLAEGGGV	1308.55	1.26
	SGEGDFLAEGGGV	1193.52	1.16
	GDFLAEGGGV	920.42	1.15
	MADEAGSEADHEGTHSTKRGHA	2292.98	1.13
	ADEAGSEADHEGTHSTKRGHA	2161.94	0.93
	DEAGSEADHEGTHSTKRGHA	2090.90	0.82
	DEAGSEADHEGTHSTKRG	1882.80	1.03
	ADSGEGDFLAEGGGV	1535.69	0.79
	SGEGDFLAEGGGV	1349.62	0.75
	GEGDFLAEGGGV	1262.59	1.31
	EGDFLAEGGGV	1205.57	1.01
	GDFLAEGGGV	1076.52	0.93
	LAEGGGV	757.41	1.24
<b>C3f</b>	SSKITHRIHWESASLLR	2020.10	0.91
	SKITHRIHWE	1305.69	0.92
	SKITHRIHWESASLL	1776.96	0.85
	THRIHWE	977.48	1.06
<b>C4a</b>	GLEEELQFSLGSKINVKVGGNS	2304.20	2.92*
	RNGFKSHALQLNNRQI	1895.02	1.83*
	NGFKSHALQLNNR	1497.78	1.64
	SHALQLNN	895.45	1.69
<b>ITI4</b>	QLGLPGPPDVPDHAAYHPFR	2183.09	1.31
	QLGLPGPPDVPDHAAYHPF	2026.99	0.97
	GLPGPPDVPDHAAYHPF	1785.85	0.75
	GLPGPPDVPDHA	1170.57	0.93
<b>apoA-1</b>	ATEHLSTLSEKAKPALEDL	2052.07	1.22
	VSFLSALEEYTKKLNTQ	1970.04	1.29
<b>apoA-4</b>	ISASAEELRQLAPLAEDVRGNL	2507.35	2.73*
	SLAELGGHLDQQVEEFR	1926.94	1.89*
	SLAELGGHLDQQVEEF	1770.84	1.57
<b>Transthyretin</b>	ALGISPFHEHAEVVFTANDSGPR	2450.20	1.37
	ALLSPYSYSTTAVVTNPKE	2040.04	1.08
	SYSTTAVVTNPKE	1395.69	1.25
<b>Antichymotrypsin</b>	IIVPTDTQNIFFMSKVTNPQKA	2491.31	0.86
<b><math>\alpha</math>-1 antitrypsin</b>	LMIDQNTKSPLFMGKVVNPTQK	2488.32	0.97
<b>Protein c inhibitor</b>	SARLNSQRLVFNRPFLMF	2195.18	1.22
	SARLNSQRLVFNRPFLM	2048.11	0.87

<b>Serum albumin</b>	DAHKSEVAHRF	1295.64	1.19
	DAHKSEVAHRFKD	1538.76	0.90
<b>SAA</b>	PNHFRPAGLPEKY	1524.78	1.13
<b>Clusterin</b>	HFFFPKSRIV	1276.71	2.32*
<b>Bradykinin</b>	RPPGFSPFR	1059.56	0.81
<b>C3 precursor</b>	SEETKENEGFTVTAEGK	1854.85	0.54*

**Table S2: Quantitative peptidomic results by our novel strategy (\*p<0.05)**

<b>Protein name</b>	<b>Peptide sequence</b>	<b>Mr (calc)</b>	<b>[d6]-/[d0] ratio</b>
<b>Fibrinogen <math>\alpha</math></b>	SSSYSKQFTSSTSYNRGDSTFESKS	2767.22	1.12
	SSSYSKQFTSSTSYNRGDSTFESKSY	2930.28	1.26
	SSSYSKQFTSSTSYNRGDSTFESKSYKM	3189.42	1.39
	SYKMADEAGSEADHEGTHSTKRGHAKSRPV	3238.52	0.71
	SYKMADEAGSEADHEGTHSTKRGHA	2671.17	0.71
	KMADEAGSEADHEGTHSTKRGHAKSRPV	2988.42	0.82
	MADEAGSEADH <sub>CH3</sub> EGTHSTKRGHAKSRPV	2874.36	1.23
	MADEAGSEADHEGTHSTKRGHAKSRPV	2860.33	1.33
	MADEAGSEADHEGTHSTKRGHAKSRP	2761.26	1.49
	DEAGSEADHEGTHSTKRGHAKSRPV	2658.25	1.43
	DEAGSEADHEGTHSTKRGHAKSRP	2559.18	1.38
	EAGSEADHEGTHSTKRGHAKSRPV	2543.22	1.31
	GSESGIFTNTKESSSHHPGIAEFPSRG	2815.32	1.28
	DSGEGDFLAEGGGV	1308.55	1.27
	SGEGDFLAEGGGV	1193.52	1.41
	GDFLAEGGGV	920.42	1.31
	DFLAEGGGV	863.40	1.19
	FLAEGGGV	748.38	0.92
	FLAEGGG	649.31	0.86
	DFLAEGG	707.31	0.75
	SYKMADEAGSEADHEGTHSTK	2249.95	0.65
	SYKMADEAGSEADHEGTHST	2121.85	0.71
	MADEAGSEADHEGTHSTKRGHA	2292.98	1.13
	ADEAGSEADHEGTHSTKRGHA	2161.94	1.06
	DEAGSEADHEGTHSTKRGHA	2090.90	1.15
	DEAGSEADHEGTHSTKRG	1882.80	1.08
	ADSGEGDFLAEGGGVR	1535.69	1.05
	SGEGDFLAEGGGVR	1349.62	1.28
	GEGDFLAEGGGVR	1262.59	1.44
	EGDFLAEGGGVR	1205.57	1.35
	GDFLAEGGGVR	1076.52	1.26
	LAEGGGVR	757.41	1.21
	<b>C3f</b>	SSKITHRIHWESASLLR	2020.10
SKITHRIHWE		1305.69	0.76

	SKITHRIHWESASLL	1776.96	1.01
	KITHRIHWESASLL	1689.93	1.31
	THRIHWESASLL	1448.75	0.78
	THRIHWE	977.48	0.69
	HRIHWESASLL	1347.70	1.45
	IHWESASLL	1054.54	0.98
	HWESASLL	941.46	1.35
	HWESASL	828.38	1.06
<b>C3 precursor</b>	SEETKENEGFTVTAEGK	1854.85	0.42*
<b>C4a</b>	GLEEELQFSLGSKINVKVGGS	2304.20	3.92*
	RNGFKSHALQLNNRQI	1895.02	2.86*
	NGFKSHALQLNNR	1497.78	3.15*
	SHALQLNN	895.45	1.46
	GLEEELQFSLGSKINVKVGGSKGT	2703.44	1.17
	DDPDAPLQPVTPLQLFEGRRN	2377.20	2.45*
<b>ITI4</b>	MNFRPGVLSRQLGLPGPPDVPDHAAYHPF	3271.63	1.35
	PGVLSRQLGLPGPPDVPDHAAYHPF	2723.38	1.19
	GVLSSRQLGLPGPPDVPDHAAYHPF	2626.33	0.82
	QLGLPGPPDVPDHAAYHPFR	2183.09	136
	QLGLPGPPDVPDHAAYHPF	2026.99	1.31
	GLPGPPDVPDHAAYHPF	1785.85	1.09
	GLPGPPDVPDHA	1170.57	1.01
	GLPGPPDVPDH	1099.53	0.79
	PGPPDVPDHA	1000.46	0.71
	GPPDVPDH	832.37	1.12
	GSEMVVAGKLQDR	1388.71	1.01
<b>apoA-1</b>	QGLLPVLESFKVSFLSALEEYTKKLNTQ	3181.73	0.83
	ATEHLSTLSEKAKPAEDL	2052.07	1.39
	VSFLSALEEYTKKLNTQ	1970.04	1.59
	ELQEGARQKLHELQE	1806.92	1.03
<b>apoA-4</b>	ISASAEELRQLAPLAEDVRGNL	2507.35	1.97*
	GNTEGLQKSLAELGGHLDQQVEEFR	2754.36	1.81
	SLAELGGHLDQQVEEFR	1926.94	2.54*
	SLAELGGHLDQQVEEF	1770.84	3.78*
<b>HMW-Kininogen</b>	KHNLGHGHKHERDQGHGHQ	2208.05	2.79*
	NLGHGHKHERDQGHGHQ	1942.90	1.84*
<b>Transthyretin</b>	DSGPRRYTIAALLSPYSYSTTAVVTNPKE	3156.61	1.11
	ALGISPFHEHAEVVFTANDSGPR	2450.20	0.94
	ALLSPYSYSTTAVVTNPKE	2040.04	0.79
	SYSTTAVVTNPKE	1395.69	1.23
<b>Antichymotrypsin</b>	LMIIVPTDTQNIFFMSKVTPKQA	2735.44	1.02
	IIVPTDTQNIFFMSKVTPKQA	2491.31	1.36
<b>CK18</b>	DSSNSMQTIQKTTTRRIVDGVVSETNDTKVLRH	3843.99	4.67*
<b><math>\alpha</math>-1 antitrypsin</b>	LMIDQNTKSPLFMGKVVNPTQK	2488.32	0.92
<b>Proapolipoprotein</b>	LEEYTKKLNTQ	1365.71	1.25

<b>CK9</b>	SRSGGGGGGGLGSGGSIRSSY	1811.85	1.37
<b>Protein c inhibitor</b>	SARLNSQRLVFNRPFLMFIVDNNILFLGKVNRP	3888.15	0.81
	SARLNSQRLVFNRPFLMF	2195.18	0.95
	SARLNSQRLVFNRPFLM	2048.11	1.09
<b>Serum albumin</b>	DAHKSEVAHRF	1295.64	1.03
	DAHKSEVAHRFKD	1538.76	0.96
<b>SAA</b>	PNHFRPAGLPEKY	1524.78	1.39
<b>apoC-1</b>	FQKVKEKLIKIDS	1461.86	1.25
<b>C1-inhibitor</b>	MGRVYDPRA	1063.52	1.46
<b>apoE</b>	AATVGSLAGQPLQERAQAWGERLR	2564.36	1.64*
	AATVGSLAGQPLQERAQAWGERL	2408.26	2.83*
<b>Clusterin</b>	HFFFPKSRIV	1276.71	2.05*
	HFFFPK	821.42	2.77*
<b>Bradykinin</b>	RPPGFSPFR	1059.56	0.82
	RPPGFSPF	903.46	1.06
<b>Factor XIII</b>	AVPPNNSNAEDDLPTVELQGVVPR	2601.30	1.37
<b>Ghrelin</b>	GSS <sub>octanoyl</sub> FLSPEHQRVQQRKESKPPAKLQPR	3371.87	4.46*