



Supplementary Material

Supplementary table 1. Quantification parameters in SciexOS

Parameter	Details
Integration Algorithm	AutoPeak
Peak selection	By expected retention time
Preprocessing	Low smoothing Noise filter
Minimum peak height	100
Minimum signal/noise	3
Regression parameter	Area
Regression type	Linear through zero
Weighting type	None
Internal standard	Norleucine

Supplementary table 2. Calibration range of dipeptides (fmol on column) and precision for 50 fmol

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Analyte	Lower Limit	Upper Limit	slope	r ²	%CV intra-assay (n=3)	%CV inter-assay (n=8)
Ala-Ala	0.1	500	0.68665	0.99	1.50	3.4
Ala-Gln	1.25	500	0.07204	0.99	4.40	4.9
Ala-Glu	0.1	500	0.25489	0.99	3.00	8
Ala-Gly	0.1	500	0.5183	0.99	3.20	4.7
Ala-His	1.25	1250	0.01365	0.99	9.10	14.5
Ala-Phe	0.1	500	0.86063	0.99	0.40	1.8
Ala-Pro	0.25	500	0.77599	0.99	0.80	6.1
Ala-Tyr	0.1	500	0.46913	0.99	2.00	8.9
Anserine	2.5	1250	0.00407	0.99	9.60	12
Arg-Phe	2.5	1250	0.01338	0.98	18.50	27.2
Asp-Gln	0.5	500	0.02695	0.99	2.60	6.1
Aspartame	0.1	500	0.94842	0.99	1.10	1.1
Carnosine	2.5	1250	0.01212	0.99	11.70	13
Glu-Glu	0.1	500	0.26133	0.99	2.20	7.7
Glu-Ser	0.1	500	0.27531	0.99	3.60	8.1
Gly-Asp	0.1	500	0.38197	0.99	0.60	3.2
Gly-Glu	0.1	500	0.19695	0.99	3.10	5.1
Gly-His	1.25	500	0.02151	0.99	1.70	20.6
Gly-Phe	0.1	500	0.83350	0.99	1.00	9.3
Gly-Pro	1.25	2500	0.47691	0.99	1.10	1
Gly-Sar	0.1	2500	0.46406	0.99	2.00	4.9
His-Ala	2.5	1250	0.00646	0.99	10.20	9.4
His-Leu	1.25	1250	0.01749	0.99	3.40	6.6
His-Ser	2.5	1250	0.00395	0.99	12.40	15.6
Leu-His	2.5	1250	0.01121	0.99	0.70	13.2
Leu-Pro	0.1	500	1.23841	0.99	1.60	3.8
Phe-Ala	0.1	500	0.71722	0.99	1.90	3
Pro-Gly	0.1	500	0.34212	0.99	2.40	6.1
Pro-Leu	0.1	500	0.78262	0.99	3.20	3.8
Ser-Ala	0.25	500	0.59395	0.99	1.50	3.8
Ser-Gln	0.25	500	0.06133	0.99	6.20	5.6
Ser-His	1.25	1250	0.00617	0.99	8.70	23.2
Tyr-Ala	0.1	500	0.52569	0.99	0.60	10.7
Tyr-Phe	0.1	500	0.52747	0.99	0.60	12.2
Val-Tyr	0.1	500	0.61847	0.99	2.10	6.5
γ-Glu-ε-Lys	1.25	250	0.0076	0.99	25.30	25.6

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Supplementary table 3. Recovery in spiked lung tissue samples (mean±SD; n=3)

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Analyte			Level 1		Level 2		Level 3		
Ala-Ala	83.40	±	0.61	90.54	±	0.49	90.31	±	1.12
Ala-Gln	79.50	±	6.82	87.79	±	0.97	89.50	±	1.25
Ala-Glu	79.72	±	3.67	89.73	±	1.96	90.05	±	0.59
Ala-Gly	74.67	±	2.96	86.31	±	1.43	87.54	±	1.33
Ala-His	64.02	±	6.03	74.71	±	3.65	81.21	±	2.26
Ala-Phe	81.63	±	0.80	90.17	±	1.05	90.91	±	0.59
Ala-Pro	78.73	±	0.72	88.27	±	0.44	91.69	±	1.93
Ala-Tyr	80.39	±	1.39	88.86	±	0.34	88.97	±	0.75
Anserine				104.49	±	3.52	85.06	±	2.36
Arg-Phe	83.10	±	2.67	81.22	±	3.00	87.84	±	0.36
Asp-Gln	71.82	±	4.86	86.10	±	4.01	88.89	±	0.71
Aspartame	85.42	±	0.63	93.73	±	0.45	93.83	±	0.82
Carnosine	71.58	±	25.24	78.83	±	8.28	78.80	±	1.07
γ-Glu-ε-Lys	92.80	±	14.22	82.05	±	3.89	80.28	±	2.00
Glu-Glu	81.86	±	3.93	90.09	±	0.57	91.70	±	1.09
Glu-Ser	87.27	±	3.24	90.80	±	2.21	89.32	±	0.44
Gly-Asp	102.57	±	2.81	99.71	±	1.02	100.57	±	2.59
Gly-Glu	79.58	±	3.46	86.90	±	1.16	90.22	±	0.08
Gly-His	75.68	±	2.12	82.03	±	1.31	85.14	±	1.58
Gly-Phe	83.74	±	1.70	91.56	±	1.66	93.18	±	0.53
Gly-Pro	72.45	±	0.09	87.00	±	0.13	92.19	±	0.43
Gly-Sar	79.03	±	2.02	90.51	±	0.67	93.25	±	0.54
His-Ala	66.12	±	15.40	77.98	±	4.13	80.44	±	2.13
His-Leu	75.99	±	5.57	85.74	±	1.77	85.13	±	1.65

His-Ser	95.28	±	14.25	78.85	±	4.20	88.25	±	1.42
Leu-His	80.27	±	1.38	83.00	±	5.08	80.16	±	1.39
Leu-Pro	83.91	±	1.14	91.59	±	0.44	92.93	±	0.29
Phe-Ala	83.16	±	1.88	89.37	±	0.86	91.09	±	0.17
Pro-Gly	92.84	±	3.44	94.61	±	1.34	96.90	±	0.40
Pro-Leu	84.07	±	0.47	90.98	±	0.60	90.77	±	0.20
Ser-Ala	84.52	±	2.06	89.59	±	1.06	91.01	±	0.87
Ser-Gln	76.20	±	7.32	86.05	±	1.01	87.72	±	1.06
Ser-His	84.69	±	6.09	82.70	±	0.69	85.05	±	1.28
Tyr-Ala	80.91	±	2.65	90.71	±	1.13	91.19	±	1.37
Tyr-Phe	79.00	±	0.98	89.84	±	1.23	91.23	±	0.68
Val-Tyr	81.38	±	2.39	90.16	±	1.30	90.48	±	0.78

Level 1: 2.5 fmol on column

Level 2: 25 fmol on column

Level 3: 250 fmol on column

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Supplementary table 4. Recovery of analytes in standard mixtures (mean±SD; n=3)

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Analyte	Level 1		Level 2		Level 3	
Ala-Ala	101.0	± 0.7	105.5	± 0.1	101.7	± 0.1
Ala-Gln	98.1	± 1.9	103.5	± 0.6	102.1	± 0.5
Ala-Glu	103.5	± 0.7	107.2	± 0.9	104.5	± 0.7
Ala-Gly	100.0	± 1.8	101.4	± 0.7	102.8	± 1.0
Ala-His	81.3	± 2.1	89.8	± 0.8	90.7	± 1.5
Ala-Phe	98.8	± 0.3	103.6	± 0.4	100.1	± 0.4
Ala-Pro	94.7	± 0.4	93.6	± 0.6	100.1	± 0.6
Ala-Tyr	94.5	± 0.1	100.1	± 0.3	97.5	± 0.0
Anserine	74.9	± 5.5	89.2	± 2.8	88.1	± 4.6
Arg-Phe	100.4	± 1.3	101.3	± 1.9	99.3	± 0.5
Asp-Gln	101.3	± 2.1	104.0	± 1.3	103.5	± 2.8
Aspartame	99.6	± 0.2	103.1	± 0.4	101.9	± 0.1
Carnosine	85.7	± 3.7	85.6	± 4.6	87.9	± 1.6
γ-Glu-ε-Lys	87.3	± 3.5	92.8	± 3.0	90.0	± 1.9
Glu-Glu	103.6	± 1.4	106.6	± 0.2	105.7	± 0.3
Glu-Ser	105.1	± 1.3	109.7	± 0.7	107.1	± 1.0
Gly-Asp	99.2	± 0.7	103.5	± 0.8	99.7	± 1.2
Gly-Glu	96.2	± 0.5	102.4	± 1.2	96.6	± 0.2
Gly-His	86.9	± 0.8	91.8	± 1.8	91.4	± 0.8
Gly-Phe	97.4	± 0.7	102.3	± 0.7	99.1	± 0.2
Gly-Pro	93.9	± 0.2	98.3	± 0.7	95.1	± 0.1
Gly-Sar	94.5	± 0.5	97.7	± 0.1	94.9	± 0.5
His-Ala	85.6	± 1.4	91.0	± 1.3	94.1	± 3.5
His-Leu	90.2	± 1.2	93.9	± 0.7	94.2	± 1.0
His-Ser	92.6	± 0.4	94.4	± 3.7	97.8	± 0.9
Leu-His	92.5	± 2.2	92.0	± 3.9	95.2	± 1.7
Leu-Pro	98.2	± 0.3	102.4	± 0.6	99.0	± 0.5
Phe-Ala	98.8	± 0.5	103.9	± 1.2	100.7	± 0.7
Pro-Gly	119.8	± 1.2	116.9	± 0.5	118.9	± 0.5
Pro-Leu	109.3	± 1.5	110.8	± 0.5	110.4	± 0.7
Ser-Ala	105.0	± 1.2	108.5	± 0.5	105.0	± 0.9
Ser-Gln	101.0	± 1.4	105.7	± 2.1	104.0	± 0.4
Ser-His	94.1	± 0.4	99.0	± 1.2	99.3	± 0.7
Tyr-Ala	99.6	± 1.4	103.6	± 0.5	99.7	± 0.8
Tyr-Phe	96.9	± 0.3	102.9	± 0.3	99.7	± 0.2
Val-Tyr	97.6	± 0.3	103.0	± 0.5	98.9	± 0.5

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Level 1: 33.3 fmol on column	17
Level 2: 83.3 fmol on column	18
Level 3: 166.7 fmol on column	19

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Supplementary table 5. Dipeptide concentrations in tissue, serum and urine (mean±SD; n=6)

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	Brown Adipose tissue	White Adipose tissue	Brain	Eyes	Heart	Kidney	Liver
Dipeptide	fmol/mg tissue						
Ala-Ala	477±368	93±71	161±62	131±93	107±35	351±455	1777±1013
Ala-Gln	332±146	54±47	84±31	258±348	171±162	205±310	11551±2968
Ala-Glu	523±369	160±122	278±106	140±92	72±22	191±258	760±319
Ala-Gly	305±127	69±49	76±100	103±71	57±18	243±279	855±346
Ala-His	872±318	b.d.	b.d.	b.d.	24±58	56±138	498±297
Ala-Phe	130±124	28±30	42±21	41±40	17±10	104±170	458±270
Ala-Pro	237±75	32±22	52±19	45±30	66±16	143±203	815±225
Ala-Tyr	866±433	49±44	189±105	141±91	41±18	170±224	391±77
Anserine	46564±3374 6	9777±4735	33853±1034 0	74156±4801 1	115762± 40282	17615±8858	35249±9029
Asp-Gln	282±426	b.d.	295±243	b.d.	b.d.	273±445	2402±673
Carnosine	9434±13552	988±560	97644± 125007	15827±1021 8	7136±5048	4280±2739	268±
γ-Glu-ε- Lys	561±445	291±131	307±241	452±332	310±163	395±397	1167±687
Glu-Glu	235±127	58±47	353±53	146±123	121±35	228±246	795±533
Glu-Ser	802±454	157±118	575±158	604±555	86±27	271±362	831±179
Gly-Asp	1192±117	311±137	1976±245	1130±717	1499±394	1664±748	3309±783
Gly-Glu	220±66	51±29	271±36	211±176	338±69	190±134	899±222
Gly-His	697±423	b.d.	260±226	71±552	268±378	144±211	2125±1211
Gly-Phe	297±117	25±16	58±18	54±33	18±7	56±68	309±124
Gly-Pro	165±28	b.d.	9±22	46±112	30±73	212±354	465±138
His-Ser	187±209	60±92	546±109	540±427	521±113	608±637	1420±395
Leu-Pro	282±108	36±23	42±14	86±46	68±22	136±172	640±236
Phe-Ala	114±77	68±49	64±29	66±45	17±6	98±165	367±148
Pro-Gly	5±10	b.d.	5±11	b.d.	25±30	b.d.	120±91
Pro-Leu	38±25	5±6	21±20	10±11	30±17	35±29	71±26
Ser-Ala	467±270	83±61	150±39	133±72	114±32	349±518	640±533
Ser-Gln	252±100	71±46	92±21	196±84	26±21	195±254	822±325
Ser-His	122±154	17±42	b.d.	b.d.	b.d.	b.d.	782±645
Tyr-Ala	50±38	7±9	12±3	13±14	8±3	31±50	91±40
Tyr-Phe	142±150	21±18	54±27	34±21	7±4	84±117	222±137
Val-Tyr	80±85	19±13	43±13	36±36	14±4	57±60	133±48

	Lungs	Muscle	Pancreas	Sciatic nerve	Spleen	Thymus	Serum	Urine (n=5)
Dipeptide	fmol/mg tissue			fmol/ μ l		fmol/mg creatinine		
Ala-Ala	31 \pm 4	209 \pm 88	146 \pm 42	108 \pm 40	861 \pm 131	414 \pm 123	41 \pm 12	18442 \pm 9769
Ala-Gln	15 \pm 15	77 \pm 52	196 \pm 94	478 \pm 502	937 \pm 290	612 \pm 316	627 \pm 634	132 \pm 118
Ala-Glu	32 \pm 8	86 \pm 6	166 \pm 36	54 \pm 24	1539 \pm 392	1138 \pm 286	4 \pm 6	862 \pm 382
Ala-Gly	36 \pm 6	57 \pm 17	119 \pm 44	197 \pm 155	4293 \pm 1018	346 \pm 60	155 \pm 342	2492 \pm 1491
Ala-His	b.d.	b.d.	b.d.	b.d.	409 \pm 136	375 \pm 66	b.d.	b.d.
Ala-Phe	5 \pm 5	15 \pm 12	64 \pm 20	5 \pm 13	185 \pm 43	89 \pm 22	b.d.	44 \pm 61
Ala-Pro	29 \pm 18	35 \pm 6	392 \pm 152	56 \pm 26	537 \pm 86	559 \pm 149	14 \pm 25	3352 \pm 1259
Ala-Tyr	7 \pm 4	274 \pm 65	95 \pm 38	46 \pm 37	365 \pm 53	153 \pm 19	b.d.	85 \pm 117
Anserine	24690 \pm 5920	5399365 \pm 212 0970	14683 \pm 3497	61090 \pm 21894	202932 \pm 13481	100476 \pm 10319	6659 \pm 1278	1416808 \pm 343416
Asp-Gln	b.d.	b.d.	209 \pm 340	b.d.	1295 \pm 293	2270 \pm 595	b.d.	3476 \pm 2058
Carnosine	938 \pm 380	2303395 \pm 143 8991	1216 \pm 1172	29093 \pm 11654	5862 \pm 1292	3861 \pm 974	256 \pm 398	16284 \pm 16426
γ-Glu-ϵ-Lys	552 \pm 328	348 \pm 287	341 \pm 298	343 \pm 294	1455 \pm 504	969 \pm 788	861 \pm 567	36471 \pm 51450
Glu-Glu	54 \pm 10	361 \pm 112	264 \pm 70	109 \pm 32	733 \pm 148	807 \pm 139	3 \pm 8	4706 \pm 2194
Glu-Ser	101 \pm 36	2159 \pm 1280	345 \pm 165	307 \pm 253	14137 \pm 1393	1238 \pm 227	b.d.	853 \pm 1908
Gly-Asp	1104 \pm 260	2211 \pm 461	3248 \pm 306	666 \pm 209	5803 \pm 442	6013 \pm 667	611 \pm 215	207245 \pm 9825 8
Gly-Glu	130 \pm 24	605 \pm 151	962 \pm 169	85 \pm 24	707 \pm 89	1214 \pm 227	64 \pm 37	14205 \pm 7113
Gly-His	b.d.	232 \pm 177	330 \pm 193	b.d.	2375 \pm 910	612 \pm 384	b.d.	b.d.
Gly-Phe	9 \pm 2	42 \pm 8	119 \pm 32	18 \pm 7	483 \pm 87	125 \pm 15	29 \pm 9	143 \pm 95
Gly-Pro	22 \pm 53	41 \pm 63	266 \pm 33	b.d.	309 \pm 70	442 \pm 65	b.d.	134138 \pm 53721
His-Ser	323 \pm 104	2100 \pm 670	1188 \pm 202	329 \pm 369	1715 \pm 203	1293 \pm 367	b.d.	4013 \pm 3792
Leu-Pro	38 \pm 17	37 \pm 9	165 \pm 40	71 \pm 67	243 \pm 38	377 \pm 87	17 \pm 12	7459 \pm 3510
Phe-Ala	16 \pm 12	12 \pm 3	77 \pm 35	7 \pm 11	1209 \pm 1213	93 \pm 20	b.d.	87 \pm 50
Pro-Gly	b.d.	23 \pm 22	b.d.	b.d.	48 \pm 20	33 \pm 23	b.d.	41287 \pm 20329
Pro-Leu	16 \pm 16	39 \pm 13	47 \pm 60	b.d.	105 \pm 31	46 \pm 19	b.d.	1354 \pm 1913
Ser-Ala	56 \pm 16	47 \pm 8	214 \pm 49	49 \pm 23	1189 \pm 167	422 \pm 63	b.d.	141 \pm 133
Ser-Gln	16 \pm 17	26 \pm 29	114 \pm 33	16 \pm 39	913 \pm 157	377 \pm 72	b.d.	1618 \pm 582
Ser-His	b.d.	b.d.	b.d.	b.d.	669 \pm 212	375 \pm 209	b.d.	b.d.

Tyr-Ala	4±3	10±2	8±9	17±22	105±21	111±20	b.d.	b.d.
Tyr-Phe	8±4	4±3	138±34	18±11	115±73	80±34	b.d.	b.d.
Val-Tyr	7±4	25±8	53±13	14±12	149±44	44±14	3±7	3203±1165

b.d. = below detection limit

Supplementary table 6. Amino acid concentrations in tissue, serum and urine (mean±SD; n=3)

Amino acid	Brown	White	Brain	Eyes	Heart	Kidney	Liver
	Adipose tissue	Adipose tissue					
Ala	336±57	68±43	694±196	269±163	468±105	212±81	1253±279
Arg	29±5	7±3	31±3	69±37	37±10	22±9	14±6
Asn	19±3	7±3	30±7	25±12	31±10	18±9	45±14
Asp	105±16	24±13	706±58	144±55	216±73	224±96	100±22
Gln	254±31	81±44	1103±134	464±274	732±229	120±61	670±390
Glu	209±106	50±24	1493±793	519±223	472±138	477±268	205±67
Gly	140±17	63±25	273±127	223±136	104±29	350±193	422±123
His	21±3	6±3	31±6	276±225	35±11	26±12	145±40
Ile	16±3	4±1	12±2	33±17	15±3	17±9	50±13
Leu	35±5	9±4	27±4	86±47	33±8	36±19	101±23
Lys	61±10	17±8	62±15	135±64	77±24	40±20	171±50
Met	20±3	6±3	20±4	67±32	23±8	21±11	31±8
Phe	18±2	5±3	17±3	59±35	15±5	14±7	37±11
Pro	20±19	8±9	22±19	17±21	16±15	6±7	55±58
Ser	96±12	49±24	277±96	156±79	74±21	159±95	91±28
Tyr	18±3	5±2	19±4	75±48	15±6	23±12	32±11
Val	38±4	10±4	27±5	96±40	32±6	35±17	92±23

Amino acid	Lungs	Muscle	Pancreas	Sciatic nerve	Spleen	Thymus	Serum	Urine (n=5)
	pmol/mg tissue				pmol/μl		pmol/mg creatinine	
Ala	139±24	883±400	787±131	220±39	413±71	611±85	361±110	119±96
Arg	11±2	110±23	66±29	44±11	81±14	62±8	47±6	443±351

Asn	13±3	28±7	89±16	16±6	86±12	98±11	27±7	165±68
Asp	142±16	55±16	126±39	103±28	834±173	717±59	91±59	209±100
Gln	164±35	448±121	377±62	169±34	374±49	476±72	346±79	252±130
Glu	237±35	136±35	819±213	365±118	1111±224	1233±110	174±96	278±152
Gly	387±52	510±202	688±100	201±30	468±58	485±50	246±60	462±132
His	14±2	53±9	81±11	18±5	80±11	47±4	47±10	50±18
Ile	7±1	21±4	24±5	11±1	61±11	42±5	50±6	65±35
Leu	16±3	42±9	75±6	25±4	151±26	85±9	99±11	70±29
Lys	25±7	327±107	172±24	123±13	155±29	111±21	149±35	195±129
Met	10±2	29±10	61±15	16±5	55±10	40±4	38±4	104±44
Phe	7±2	24±7	35±5	15±3	67±11	40±5	44±4	49±27
Pro	3±8	35±40	78±86	3±8	43±62	28±60	32±28	59±37
Ser	91±12	114±31	521±53	114±24	660±107	779±50	120±47	127±49
Tyr	8±2	26±8	65±37	15±4	54±11	39±7	39±7	174±49
Val	17±2	56±13	68±6	29±5	121±19	80±7	110±9	84±21

b.d. = below detection limit

Supplementary table 7. Correlation (>0.7) of dipeptides with their corresponding amino acids in either C- or N-position

Dipeptide	Organ	AA in N-terminus	Correlation	AA in C-terminus	Correlation
Gly-Asp	Adipose Tissue (white)	Gly	0,90	Asp	0,92
γ-Glu-ε-Lys	Adipose Tissue (white)	Glu	0,70	Lys	0,79
Glu-Ser	Adipose Tissue (white)	Glu	0,82	Ser	0,88
Ala-Ala	Adipose Tissue (white)	Ala	0,97	Ala	0,97
Gly-Glu	Adipose Tissue (white)	Gly	0,94	Glu	0,93
Ala-Gln	Adipose Tissue (white)	Ala	0,87	Gln	0,65
His-Ser	Adipose Tissue (white)	His	0,96	Ser	0,77
Ala-Gly	Adipose Tissue (white)	Ala	0,96	Gly	0,95
Leu-Pro	Adipose Tissue (white)	Leu	0,94	Pro	0,71
Glu-Glu	Adipose Tissue (white)	Glu	0,98	Glu	0,98
Ala-Glu	Adipose Tissue (white)	Ala	0,93	Glu	0,95
Ala-Pro	Adipose Tissue (white)	Ala	0,92	Pro	0,58
Ser-Ala	Adipose Tissue (white)	Ser	0,81	Ala	0,91

Ser-Gln	Adipose Tissue (white)	Ser	0,73	Gln	0,65
Val-Tyr	Adipose Tissue (white)	Val	0,86	Tyr	0,90
Ala-Tyr	Adipose Tissue (white)	Ala	0,92	Tyr	0,71
Phe-Ala	Adipose Tissue (white)	Phe	0,81	Ala	0,81
Gly-Phe	Adipose Tissue (white)	Gly	0,92	Phe	0,93
Ala-Phe	Adipose Tissue (white)	Ala	0,94	Phe	0,90
Tyr-Phe	Adipose Tissue (white)	Tyr	0,66	Phe	0,80
Tyr-Ala	Adipose Tissue (white)	Tyr	0,89	Ala	0,92
Pro-Gly	Brain	Pro	0,12	Gly	0,84
Gly-Glu	Brain	Gly	0,92	Glu	0,54
Gly-Phe	Brain	Gly	0,79	Phe	0,31
Gly-Asp	Eyes	Gly	0,99	Asp	0,88
Gly-Pro	Eyes	Gly	0,99	Pro	0,00
γ-Glu-ϵ-Lys	Eyes	Glu	0,82	Lys	0,79
Glu-Ser	Eyes	Glu	0,97	Ser	0,97
Ala-Ala	Eyes	Ala	0,98	Ala	0,98
Gly-Glu	Eyes	Gly	0,99	Glu	0,98
His-Ser	Eyes	His	0,89	Ser	0,87
Ala-Gly	Eyes	Ala	0,76	Gly	0,73
Leu-Pro	Eyes	Leu	0,95	Pro	0,28
Glu-Glu	Eyes	Glu	0,98	Glu	0,98
Ala-Glu	Eyes	Ala	0,97	Glu	0,96
Ala-Pro	Eyes	Ala	0,97	Pro	0,21
Ser-Ala	Eyes	Ser	0,96	Ala	0,98
Ser-Gln	Eyes	Ser	0,92	Gln	0,95
Val-Tyr	Eyes	Val	0,99	Tyr	0,97
Ala-Tyr	Eyes	Ala	0,95	Tyr	0,88
Phe-Ala	Eyes	Phe	0,87	Ala	0,90
Gly-Phe	Eyes	Gly	0,96	Phe	0,95
Ala-Phe	Eyes	Ala	0,98	Phe	0,98
Tyr-Phe	Eyes	Tyr	0,92	Phe	0,95
Tyr-Ala	Eyes	Tyr	0,97	Ala	0,95
Gly-Asp	Heart	Gly	0,91	Asp	0,95
Glu-Ser	Heart	Glu	0,94	Ser	0,90
Ala-Ala	Heart	Ala	0,78	Ala	0,78
Gly-Glu	Heart	Gly	0,86	Glu	0,83
Ala-Gly	Heart	Ala	0,80	Gly	0,57
Leu-Pro	Heart	Leu	0,86	Pro	0,58
Glu-Glu	Heart	Glu	0,85	Glu	0,85
Ala-Glu	Heart	Ala	0,94	Glu	0,86

Ser-Ala	Heart	Ser	0,97	Ala	0,82
Val-Tyr	Heart	Val	0,64	Tyr	0,70
Ala-Tyr	Heart	Ala	0,67	Tyr	0,80
Phe-Ala	Heart	Phe	0,73	Ala	0,99
Gly-Phe	Heart	Gly	0,86	Phe	0,79
Ala-Phe	Heart	Ala	0,91	Phe	0,87
Tyr-Ala	Heart	Tyr	0,84	Ala	0,28
Gly-Asp	Kidney	Gly	0,98	Asp	0,76
Gly-Glu	Kidney	Gly	0,78	Glu	0,78
His-Ser	Kidney	His	0,80	Ser	0,98
Leu-Pro	Kidney	Leu	0,72	Pro	-0,31
Glu-Glu	Kidney	Glu	0,79	Glu	0,79
Val-Tyr	Kidney	Val	0,71	Tyr	0,39
Phe-Ala	Kidney	Phe	0,75	Ala	0,36
Gly-Phe	Kidney	Gly	0,64	Phe	0,78
Ala-Phe	Kidney	Ala	0,32	Phe	0,71
Tyr-Phe	Kidney	Tyr	0,31	Phe	0,76
Gly-Asp	Liver	Gly	0,89	Asp	0,88
γ-Glu-ϵ-Lys	Liver	Glu	0,81	Lys	0,46
His-Ser	Liver	His	0,55	Ser	0,86
Leu-Pro	Liver	Leu	0,79	Pro	0,50
Glu-Glu	Liver	Glu	-0,71	Glu	-0,71
Ala-Pro	Liver	Ala	0,86	Pro	0,71
Ala-Phe	Liver	Ala	-0,84	Phe	-0,19
Gly-Asp	Lungs	Gly	0,81	Asp	0,34
Gly-Glu	Lungs	Gly	0,76	Glu	0,85
Glu-Glu	Lungs	Glu	0,74	Glu	0,74
Val-Tyr	Lungs	Val	0,70	Tyr	0,85
Gly-Pro	Muscle	Gly	0,90	Pro	0,08
Pro-Gly	Muscle	Pro	0,34	Gly	0,75
Ala-Ala	Muscle	Ala	0,93	Ala	0,93
Gly-Glu	Muscle	Gly	0,82	Glu	0,30
Ala-Gly	Muscle	Ala	0,64	Gly	0,73
Gly-His	Muscle	Gly	0,85	His	0,84
Ala-Pro	Muscle	Ala	0,79	Pro	0,26
Val-Tyr	Muscle	Val	0,73	Tyr	0,66
Ala-Phe	Muscle	Ala	-0,70	Phe	-0,81
γ-Glu-ϵ-Lys	Pancreas	Glu	-0,42	Lys	-0,81
Gly-His	Pancreas	Gly	0,76	His	0,62
Ala-Pro	Pancreas	Ala	0,83	Pro	0,37

Ser-Ala	Pancreas	Ser	-0,73	Ala	0,11
Val-Tyr	Pancreas	Val	0,24	Tyr	0,81
Ala-Tyr	Pancreas	Ala	0,91	Tyr	0,65
Tyr-Ala	Pancreas	Tyr	0,55	Ala	0,83
γ-Glu-ϵ-Lys	Sciatic nerve	Glu	0,87	Lys	0,49
Ala-Ala	Sciatic nerve	Ala	0,91	Ala	0,91
Gly-Glu	Sciatic nerve	Gly	-0,09	Glu	0,85
Ala-Gln	Sciatic nerve	Ala	0,77	Gln	0,62
Glu-Glu	Sciatic nerve	Glu	0,73	Glu	0,73
Ala-Glu	Sciatic nerve	Ala	0,87	Glu	0,56
Ser-Ala	Sciatic nerve	Ser	0,28	Ala	0,77
Val-Tyr	Sciatic nerve	Val	0,75	Tyr	0,41
Gly-Asp	Serum	Gly	-0,80	Asp	-0,66
Ala-Ala	Serum	Ala	0,86	Ala	0,86
Ala-Gly	Serum	Ala	0,92	Gly	0,72
Ala-Glu	Serum	Ala	0,82	Glu	0,61
Ala-Pro	Serum	Ala	0,86	Pro	0,38
Gly-Pro	Spleen	Gly	0,95	Pro	0,58
Glu-Ser	Spleen	Glu	0,61	Ser	0,74
Ala-Pro	Spleen	Ala	0,82	Pro	0,84
Ala-His	Spleen	Ala	-0,05	His	0,87
Gly-Phe	Spleen	Gly	0,52	Phe	0,86
Ser-His	Spleen	Ser	-0,26	His	0,71
Gly-Pro	Thymus	Gly	0,87	Pro	0,36
Phe-Ala	Thymus	Phe	0,78	Ala	0,23
Gly-Phe	Thymus	Gly	0,84	Phe	0,77
Ser-His	Thymus	Ser	0,12	His	0,78
Gly-Asp	Urine	Gly	0,60	Asp	0,88
γ-Glu-ϵ-Lys	Urine	Glu	-0,21	Lys	0,76
Pro-Gly	Urine	Pro	0,74	Gly	0,31
Gly-Glu	Urine	Gly	0,56	Glu	0,77
Ala-Gln	Urine	Ala	0,47	Gln	0,98
His-Ser	Urine	His	0,81	Ser	0,79
Ala-Pro	Urine	Ala	0,00	Pro	0,87
Val-Tyr	Urine	Val	-0,84	Tyr	0,59
Ala-Phe	Urine	Ala	0,76	Phe	0,30