Table S1 The amino acid sequence and source information of the reported marine umami peptides

Number	Peptides	Source	Threshhold	Reference
1	GLLPDGTPR	*Meretrix*	0.125 (mg/mL)	[19]
2	RPNPFENR		0.125	
3	STMLLESER		0.125	
4	ANPGPVRDLR		0.125	
5	QVAIAHRDAK		0.125	
6	VLPTDQNFILR		0.125	
7	VTADESQQDVLK		0.125	
8	GRVSNCAA	*Ruditapes philippinarum*	0.320 (mmol/L)	[50]
9	SEEK		2.030	
10	KEMQKN		1.290	
11	KSAEN		0.230	
12	QIEELEGK		0.270	
13	TDVEQEGD		1.120	
14	HNESQN		0.690	
15	RGEPNND		2.500	
16	TGDPEK		3.100	
17	KGGGGP		0.530	
18	TYLPVH		2.740	
19	PAATIPE		1.430	
20	GPAGPAGPR		1.280	
21	AGAGPTP		0.880	
22	LMSL	*Ruditapes philippinarum ;* *Mactra veneriformis*	0.541 (mmol/L)	[69]
23	EFLKEQF		0.532	
24	DEELNKLL		0.514	
25	KALSEELDN		0.246	
26	TETKTFTLK		0.234	
27	AAEAKLELLE		0.230	
28	KETLEQEKSG		0.218	
29	TWKE		0.222	
30	DLRAD		0.212	
31	DDLDR		0.198	
32	KSLEEA		1.481	
33	MQAMKLEK		0.512	
34	DQLEKQVK		0.507	
35	AKALKEEDL		0.123	
36	MKIEKENAL	*Oreochromis mossambicus*	-	[92]
37	TGFLPEEYMK		0.412	
38	FVAKIKGKEQ		-	
39	AMKLEKENAL		0.218	
40	VADLMR		0.250 (mg/mL)	
41	STELFK		0.125	
42	DALKKK		0.125	
43	FVGLQER		0.250	
44	VVLNPVARVE		0.125	
45	INKPGLINKPGL		0.250 (mg/mL)	

46	SDSCIR	*Gadus morhua*	0.400	[51]
47	GPDPER		0.500	
48	DDF		-	
49	ADC		-	
50	GGR		-	
51	DNW		-	
52	QDF		-	
53	EGF	*Gadus morhua*	-	[52]
54	IGDM		-	
55	DCIY		-	
56	AGCD		-	
57	QDTW		-	
58	SGDAW		-	
59	NDDGW		-	
60	NWDDMEK	*Takifugu obscurus*	0.380 (mmol/L)	[44]
61	KTGLSPDQF		1.040	
62	KTDLNFENL		0.920	
63	ASLDGEFKG		0.540	
64	ALASLDGEFKG		0.450	
65	ALTSLDGEFKG		0.440	
66	RLGSSEVEQVQ		0.810	
67	MTNLLEDLSFR		0.100 (mg/mL)	
68	GFGDSCTPGKNER		0.125	
69	ADSNIQINGTDR		0.500	
70	AREIALQELGEQAK	Thai fish sauce	0.500	[87]
71	IQQDDCK		0.200	
72	QAEADMAR		0.100	
73	MAASGDVGK		0.100 (mg/mL)	
74	VYETPDR		0.100	
75	DAPYDYK		0.075	
76	TREQMIHER		0.500	
77	LLDAFFFDNK		0.300	
78	EATLWDMEEK		0.250	
79	LPLLEEAFLSR		0.100	
80	NALKSVECYDAR		0.100	
81	AKLTSLEEECQR		0.100	
82	YLASCLSSVKEEK	*Engraulis*	0.050	[51]
83	EQLEATVQKLDESR		0.100	
84	MEREQEESTMR		0.100	
85	SGVVAAVNDAAKDFHG		0.250	

86	VLSLNSGTEAVEAAIK		0.250	
87	EGSTIGLSK		0.125	
88	IMEALAGAGIDPRR		0.200	
89	NQEGLFR		0.200	
90	APAP		0.306 (mmol/L)	
91	ASEFFR		0.296	
92	LGDVLVR	*Trachinotus ovatus*	0.284	[21]
93	AEASALR		0.152	
94	WDDMEK		0.034	
95	RD		0.050 (mg/mL)	
96	DGV		0.150	
97	DK	*Scomberomorus niphonius*	0.200	[30]
98	DR		0.100	
99	DF		0.500	
100	DP		0.200	
101	DM		0.400	
102	DN		-	
103	TFYNELR		0.550 (mg/mL)	
104	TLFQPSF	*Scomberomorus niphonius*	0.430	[128]
105	LYANNVL		0.510	
106	FAGDDAPRAVFPS		0.330	
107	NWDDMEK		-	
108	WFKDEEF		-	
109	EEEKPKF	*Siniperca chuatsi*	-	[110]
110	DFDDIQK		-	
111	DGEKVDF		-	
112	DVILPVPAF		0.258 (mmol/L)	
113	TVAGGAWTYNTTSAVTVK	*Takifugu flavidus*	0.799	[30]
114	AMLEQVAMTDK		0.273	
115	IGAEVYHNLK		0.858	
116	GGKLVVDGHAIT		0.437	
117	HLQLAIR		0.240 (mmol/L)	
118	DPLRGGYY		0.270	
119	AGLQFPVGR		0.260	
120	LLLPGELAK	*Takifugu rubripes*	0.130	[71]
121	AGFAGDDAPR		0.060	
122	GYSFTTTAER		0.110	
123	DAGVIAGLNVLR		0.100	
124	PVARMCR		0.040 (mg/mL)	
125	YGGTPPFV	*Takifugu obscurus*	0.050	[70]
126	YGGTPFV		-	

127	FLNQDEEAR		0.580 (mg/mL)	
128	FNKEE	*Crassostrea gigas*	0.380	[91]
129	EEFLK		0.550	
130	LADW		0.125 (mmol/L)	
131	MEIDD	Tuna	0.125	[54]
132	VAEQE		0.125	
133	EEAEGT		0.250	
134	EANK		-	
135	EEAK	*Oncorhynchus mykiss*	-	[53]
136	EMQK		-	
137	ER		-	
138	DPC		-	
139	DVC	*Mictyris brevidactylus*	-	[13]
140	DVD		-	
141	WF		-	

Notes: “-”means the amino acid sequence of marine umami peptide was not detected