

Table S1. The peptidomic analysis of AMPs purified from the skin secretions of *O. rotodora*

AMPs Name	HPLC Position in Fig. S3.	TMW ^a Da		OMW ^b Da	Difference Da	Fig.
		Reduced	Oxidized			
Brevinin-2-OR1	Peak 1 in C1	3235.80	3233.80	3234.60	0.80	S50
Brevinin-2-OR2	Peak 1 in C2	3351.98	3349.98	3350.40	0.42	S51
Brevinin-2-OR3	Peak 2 in C2	3366.01	3364.01	3364.40	0.39	S52
Brevinin-2-OR4	Peak 3 in C2	3236.75	3234.75	3235.00	0.25	S53
Brevinin-2-OR5	Peak 1 in C3	3357.88	3355.88	3356.60	0.72	S54
Brevinin-2-OR6	Peak 2 in C3	3353.91	3351.91	3352.30	0.39	S55
Brevinin-2-OR7	Peak 3 in C3	3366.01	3364.01	3364.90	0.81	S56
Brevinin-2-OR8	Peak 1 in C4	3356.94	3354.94	3354.50	0.44	S57
Brevinin-1-OR1	Peak 1 in C5	2454.96	2452.96	2454.20	1.24	S58
Esculentin-2-OR6	Peak 2 in C5		2244.66	2246.20	1.54	S59
Brevinin-1-OR2	Peak 3 in C5	2568.12	2566.12	2566.8	0.68	S60
Nigrocin-OR1	Peak 4 in C5	1987.49	1985.49	1985.50	0.01	S61
Odorranain-F-OR1	Peak 1 in C6	3011.61	3009.61	3010.10	0.49	S62
Brevinin-1-OR3	Peak 2 in C6	2570.05	2568.05	2567.40	0.65	S63
Nigrocin-OR2	Peak 3 in C6	1990.51	1988.51	1987.10	1.41	S64
Brevinin-1-OR4	Peak 1 in C7	2569.07	2567.07	2566.20	0.87	S65
Nigrocin-OR3	Peak 2 in C7	1990.51	1988.51	1986.80	1.71	S66
	Peak 1 in C8					S67
Brevinin-2-OR9	Peak 2 in C8	3554.14	3552.14	3553.00	0.86	S68
Esculentin-2-OR1	Peak 3 in C8	3879.69	3877.69	3878.70	1.01	S69
Brevinin-1-OR5	Peak 1 in C9	2568.17	2566.17	2566.80	0.63	S70
Brevinin-1-OR6	Peak 2 in C9	2569.11	2567.11	2568.40	1.29	S71
Brevinin-2-OR10	Peak 3 in C9	3554.14	3552.14	3552.10	0.04	S72
Esculentin-2-OR2	Peak 4 in C9	3879.73	3877.73	3878.10	0.37	S73
Brevinin-1-OR7	Peak 1 in C10	2553.10	2551.10	2551.80	0.70	S74
Brevinin-1-OR8	Peak 2 in C10	2569.11	2567.11	2567.90	0.79	S75
Esculentin-2-OR3	Peak 3 in C10	3879.69	3877.69	3877.70	0.01	S76
	Peak 1 in C11					S77
	Peak 2 in C11					S78
Esculentin-2-OR4	Peak 3 in C11	3894.70	3892.70	3892.80	0.1	S79
	Peak 1 in C12					S80
	Peak 2 in C12					S81
Esculentin-1-OR2	Peak 3 in C12	4404.31	4402.31	4402.00	0.31	S82
Esculentin-1-OR5	Peak 1 in C13	4826.81	4824.81	4826.30	1.49	S83
Esculentin-1-OR1	Peak 2 in C13	4808.78	4806.78	4806.60	0.18	S84
	Peak 3 in C13					S85
Brevinin-1-OR11	Peak 4 in C13	2428.93	2426.93	2426.70	0.23	S86
Esculentin-1-OR3	Peak 5 in C13	4853.89	4851.89	4852.10	0.21	S87
Esculentin-1-OR4	Peak 6 in C13	4817.75	4815.75	4815.70	0.05	S88

Brevinin-1-OR9	Peak 7 in C13	2569.11	2567.11	2566.80	0.31	S89
Brevinin-1-OR10	Peak 8 in C13	2613.26	2611.26	2613.20	1.94	S90
Esculentin-2-OR5	Peak 9 in C13	3893.76	3891.76	3891.90	0.14	S91

The 42 peaks from HPLC procedure were taken to determine the average molecular weight and the purity, then the complete sequences of native AMPs with ideal purity were analyzed by Edman degradation and the detailed sequences can be checked in Figure S92.

- a. TMW, theoretical average molecular weight calculated at PeptideMass[32].
- b. OMW, observed average molecular weight achieved by mass-spectrometry analysis.

Peak 1 in Figure 3.C8, Peak 1,2 in Figure 3.C11, Peak 3 in Figure 3.C13, totally 4 peaks were not analyzed by Edman degradation for the insufficient purity. Peak 1, 2 in Figure 3.C12 were partially sequenced.