

Table S-7. Chemosensory genes identified by Motif/HMM search method. * Sequences also found with the 7TM/PFAM/C.elegans search; ** ≥ 70% identical to motif-possessing sequence.

Gene Number	Identification method							
	LxxxxxxRxxAlxxPL		Hidden Markov Model (HMM)					
	Motif	≥70%**	Fish OR		Lamprey OR		Fish T1R	
			Bitscore	E-value	Bitscore	E-value	Bitscore	E-value
SPU_001503			59	4.80E-16				
SPU_001504			68.1	1.30E-18				
SPU_001531	motif							
SPU_001536	motif							
SPU_001537	motif							
SPU_001914					49.6	5.50E-14		
SPU_001950		motif ≥70%						
SPU_001951		motif ≥70%						
SPU_001952		motif ≥70%						
SPU_002167					79.5	9.30E-23		
SPU_002419*	motif							
SPU_002599*			66	5.10E-18	35.2	8.80E-10		
SPU_002875					87.4	4.70E-25		
SPU_003365			45.2	3.80E-12				
SPU_003875*					90.2	6.90E-26		
SPU_004058*			55.4	5.00E-15				
SPU_004569*			52	4.50E-14				
SPU_004571*			68.6	9.50E-19				
SPU_004573*			44.1	7.80E-12				
SPU_004574*			63	3.50E-17				
SPU_004576*			49.5	2.30E-13				
SPU_004577*			48.2	5.30E-13				
SPU_004578			71.4	1.50E-19	54.7	1.80E-15		
SPU_004579*			58.2	8.10E-16	40.6	2.40E-11		
SPU_004629	motif		52.1	4.20E-14	56.4	5.50E-16		
SPU_004752*			45.9	2.50E-12				
SPU_004754*			52.3	3.80E-14				
SPU_005086					64.5	2.30E-18		
SPU_005087					38.1	1.30E-10		
SPU_005097			37	7.80E-10	126.7	1.40E-36		
SPU_005578	motif							
SPU_005678					44.3	1.90E-12		
SPU_005846					65.5	1.20E-18		
SPU_005967	motif				120	1.30E-34		
SPU_006431*	motif							
SPU_006927					44.1	2.30E-12		
SPU_007186							64.5	9.40E-18
SPU_007422			44.9	4.80E-12				
SPU_007467*			37.9	4.30E-10	40.7	2.30E-11		
SPU_007574*			66.4	4.00E-18				
SPU_007575*			68	1.30E-18				
SPU_007646*	motif							
SPU_007747							181.6	6.20E-51
SPU_007917			51.2	7.60E-14				
SPU_008190					35.3	8.30E-10		
SPU_008476*		motif ≥70%						
SPU_008564*		motif ≥70%						
SPU_008789					40.7	2.20E-11		
SPU_008947					86.7	7.40E-25		
SPU_008973					59	9.60E-17		
SPU_008988							159.4	3.10E-44
SPU_009038*	motif							
SPU_009088*			53.3	2.00E-14				
SPU_009149					59	9.40E-17		
SPU_009202*			43.3	1.30E-11				
SPU_009393							106.6	1.80E-29
SPU_009587*			70.5	2.70E-19				
SPU_009766					201.3	2.00E-58		
SPU_010357*	motif							
SPU_010387*					66.3	6.90E-19		
SPU_010431*			49.3	2.70E-13				

SPU_010497					43.3	3.70E-12		
SPU_010836*	motif		45.6	3.00E-12				
SPU_011320					173.1	3.70E-50		
SPU_011401*					38.2	1.20E-10		
SPU_011405					67.9	2.40E-19		
SPU_011672*			45.8	2.60E-12				
SPU_011698	motif							
SPU_011947					49.4	6.20E-14		
SPU_011948*					41.6	1.20E-11		
SPU_012237					42.1	8.70E-12		
SPU_012273					54.9	1.60E-15		
SPU_012434*			48.6	4.20E-13				
SPU_012435*			61.3	1.10E-16				
SPU_012436*			62.2	6.10E-17				
SPU_012438*			57.4	1.40E-15				
SPU_012499					154	1.50E-44		
SPU_012525*			53.6	1.60E-14	37.7	1.70E-10		
SPU_012562*					35.9	5.60E-10		
SPU_012799	motif							
SPU_012974*			42.7	1.90E-11				
SPU_012979					87.4	4.70E-25		
SPU_013107					201.3	2.00E-58		
SPU_013152					52.2	9.50E-15		
SPU_013306*			63.5	2.60E-17				
SPU_013359	motif		58.2	8.20E-16	63.7	4.00E-18		
SPU_013453					56.2	6.50E-16		
SPU_013623*			50.6	1.20E-13	37.1	2.50E-10		
SPU_013767			37	7.70E-10	123.8	1.00E-35		
SPU_014086					40.8	2.00E-11		
SPU_014269					104.7	3.80E-30		
SPU_014380	motif							
SPU_014447*	motif							
SPU_014448*	motif							
SPU_014487*	motif							
SPU_015098*	motif							
SPU_015139	motif							
SPU_015140	motif							
SPU_015259					40.6	2.30E-11		
SPU_015512*			39	2.20E-10				
SPU_015593					42.5	6.50E-12		
SPU_015761			37	7.70E-10	123.8	1.00E-35		
SPU_015788*			41	5.80E-11				
SPU_015847*			54.6	8.40E-15				
SPU_015968					126.1	2.20E-36		
SPU_016177					55.8	8.10E-16		
SPU_016939					58.6	1.20E-16		
SPU_016940					55.6	9.60E-16		
SPU_016941					55.5	1.00E-15		
SPU_016942					39.4	5.30E-11		
SPU_017325	motif							
SPU_017426							57.3	9.80E-16
SPU_017585							256.5	1.80E-73
SPU_017687*			53.6	1.60E-14				
SPU_017688*			53.6	1.60E-14				
SPU_017789*			50.4	1.30E-13				
SPU_017856*	motif							
SPU_017918			48.9	3.30E-13	134.1	9.90E-39		
SPU_017919			37.1	7.40E-10	124.9	4.80E-36		
SPU_018006			39.9	1.20E-10	51.6	1.40E-14		
SPU_018091					89.5	1.10E-25		
SPU_018268					38.5	9.40E-11		
SPU_018339	motif				52.6	7.10E-15		
SPU_018478							40.3	5.30E-11
SPU_018600*			54.8	7.30E-15	40.6	2.40E-11		
SPU_018826					164.8	1.00E-47		
SPU_018966					42.3	7.30E-12		
SPU_019084					48.9	8.70E-14		
SPU_019108*			49.3	2.60E-13				
SPU_019228					57.8	2.20E-16		

SPU_019281					50.2	3.50E-14		
SPU_019376*	motif							
SPU_019675	motif							
SPU_020028*			39.7	1.40E-10				
SPU_020213							67.5	1.40E-18
SPU_020348					39.9	3.80E-11		
SPU_020361*			44.1	7.70E-12	63.8	3.60E-18		
SPU_021092					52	1.00E-14		
SPU_021160*	motif							
SPU_021290	motif							
SPU_021588			46.6	1.50E-12	108.9	2.30E-31		
SPU_021794					49.1	7.80E-14		
SPU_022376	motif							
SPU_022401					37.4	2.00E-10		
SPU_022402					42.2	8.00E-12		
SPU_022403					39.8	3.90E-11		
SPU_022436*			55.4	5.00E-15				
SPU_022459*	motif							
SPU_022468	motif							
SPU_022683			49.4	2.50E-13	162.5	4.70E-47		
SPU_022684					159.6	3.30E-46		
SPU_022730*	motif		37	8.00E-10				
SPU_022857					100.3	7.70E-29		
SPU_023223	motif							
SPU_023742*	motif							
SPU_023754*			59.1	4.60E-16	35.5	7.20E-10		
SPU_023755*			47	1.20E-12				
SPU_024079*					60.4	3.80E-17		
SPU_024749			38.5	3.00E-10				
SPU_024887	motif							
SPU_024889*		motif ≥70%						
SPU_024900			51.7	5.50E-14	149.2	3.60E-43		
SPU_024924					42	9.20E-12		
SPU_024934					61.9	1.40E-17		
SPU_024992					35.1	9.40E-10		
SPU_025315							186.5	2.10E-52
SPU_025412*	motif		44.7	5.40E-12				
SPU_025436					117.6	6.60E-34		
SPU_025661							200.2	1.60E-56
SPU_025999							163.4	1.80E-45
SPU_026059*			40.5	8.10E-11				
SPU_026167*	motif							
SPU_026368*		motif ≥70%						
SPU_026369		motif ≥70%						
SPU_026370		motif ≥70%						
SPU_026432					77.1	4.60E-22		
SPU_026530							193.5	1.70E-54
SPU_026626							50.2	9.50E-14
SPU_026627							151.1	6.50E-42
SPU_026688		motif ≥70%						
SPU_026773							108.6	4.90E-30
SPU_026853					36.5	3.80E-10		
SPU_027212					40.9	1.90E-11		
SPU_027549*			50.6	1.10E-13				
SPU_027700					66.3	7.00E-19		
SPU_027867					37	2.70E-10		
SPU_027884					60.2	4.10E-17		
SPU_027908*	motif							
SPU_028063*					71.1	2.80E-20		
SPU_028231*			60.3	2.00E-16				
SPU_028351					140.9	9.90E-41		
SPU_028801					37	2.70E-10		