

Appendix 1

AllergenOnline Database v19 (February 10, 2019)

FASTA 36. 80mer Sliding Window Search Results

<b>P15322: Allergen Sin a 1 [Sinapis alba (White mustard)]</b>	
Database	AllergenOnline Database v19 (February 10, 2019)
Input Query	>query PAGPFRI PKCRKEFQQAQHLRACQQWLHKQAMQSGSGPSWTLDDDEFDFEDDMENPQGGPQQ RPPLLQCCNELHQEEPLCVCPTLKGASKAVKQQVRQQLGQQGQQGPHLQHVISRIYQTA THLPKVCNIRQVSVCPFKKTMPPGPS
Length	145
Number of 80 mers	66
Number of Sequences with hits	14

Hit #	Defline	Species	Best %ID	# Hits > 35%	Full Alignment			Links	
					E-val	%ID	length	NCBI	Details
1	gi 51338758 gid 192 Allergen Allergen Sin a 1 precursor (	Sinapis alba	100.00%	66of66	2.4e-034	100.00%	145	<a href="#">gi 51338758</a>	<a href="#">GO!</a>
2	gi 1009434 gid 192 Allergen allergen sin a 1.0104 [Sinapi	Sinapis alba	100.00%	66of66	2.3e-033	97.20%	145	<a href="#">gi 1009434</a>	<a href="#">GO!</a>
3	gi 1009440 gid 192 Allergen allergen sin a 1.0107 [Sinapi	Sinapis alba	100.00%	66of66	1.3e-033	98.60%	145	<a href="#">gi 1009440</a>	<a href="#">GO!</a>
4	gi 1009438 gid 192 Allergen allergen sin a 1.0106 [Sinapi	Sinapis alba	100.00%	66of66	3.5e-033	97.20%	145	<a href="#">gi 1009438</a>	<a href="#">GO!</a>
5	gi 1009442 gid 192 Allergen allergen sin a 1.0108 [Sinapi	Sinapis alba	98.80%	66of66	4.9e-033	96.60%	145	<a href="#">gi 1009442</a>	<a href="#">GO!</a>
6	gi 1009436 gid 192 Allergen allergen sin a 1.0105 [Sinapi	Sinapis alba	98.80%	66of66	4.5e-033	97.20%	145	<a href="#">gi 1009436</a>	<a href="#">GO!</a>
7	gi 17697 gid 1172 Putative 2S storage protein [Brassica r	Brassica rapa	93.80%	66of66	2.5e-029	88.30%	145	<a href="#">gi 17697</a>	<a href="#">GO!</a>
8	gi 75107016 gid 1142 Putative Napin-3 (Napin BnIII) (Napi	Brassica napus	91.20%	66of66	2.6e-017	82.60%	144	<a href="#">gi 75107016</a>	<a href="#">GO!</a>

9	gi 32363444 gid 1170 Putative Allergen Bra j 1-E (Bra j I	Brassica juncea	87.50%	66of66	1.8e-017	79.90%	144	<a href="#">gi 32363444</a>	<a href="#">GO!</a>
10	gi 26985163 gid 386 Putative recombinant Ib pronapin prec	Brassica napus	53.80%	66of66	0.00026	50.40%	129	<a href="#">gi 26985163</a>	<a href="#">GO!</a>
11	gi 110349081 gid 1270 Putative Pis v 1 allergen 2S albumi	Pistacia vera	39.99%	19of66	0.31	32.60%	129	<a href="#">gi 110349081</a>	<a href="#">GO!</a>
12	gi 13183175 gid 204 Putative 2S albumin [Sesamum indicum]	Sesamum indicum	35.80%	2of66	0.37	32.30%	130	<a href="#">gi 13183175</a>	<a href="#">GO!</a>
13	gi 209165427 gid 204 Putative 2S albumin [Sesamum indicum]	Sesamum indicum	35.80%	2of66	0.56	32.30%	130	<a href="#">gi 209165427</a>	<a href="#">GO!</a>
14	gi 62550933 gid 154 Putative putative LMW-glutenin subuni	Triticum aestivum	35.40%	2of66	6.9	27.90%	140	<a href="#">gi 62550933</a>	<a href="#">GO!</a>

**P80207: Allergen Bra j 1-E [Brassica juncea (Indian mustard)]**

<b>Database</b>	AllergenOnline Database v19 (February 10, 2019)
<b>Input Query</b>	>query AGPFRFRFPRCRKEFQQAQHLRACQQWLHKQAMQSGSGPQPQGPQQRPPLLQCCNELHQEE PLCVCPTLKGASKAVKQQIRQQGQQQGQQGQQQLQHEISRYYQTATHLPRVCNIPRVSICP FQKTMPGPS
<b>Length</b>	129
<b>Number of 80 mers</b>	50
<b>Number of Sequences with hits</b>	35

Hit #	Defline	Species	Best %ID	# Hits > 35%	Full Alignment			Links	
					E-val	%ID	length	NCBI	Details
1	gi 32363444 gid 1170 Putative Allergen Bra j 1-E (Bra j l	Brassica juncea	100.00%	50of50	7.1e-023	100.00%	129	<a href="#">gi 32363444</a>	<a href="#">GO!</a>
2	gi 75107016 gid 1142 Putative Napin-3 (Napin BnIII) (Napi	Brassica napus	92.50%	50of50	8.9e-020	89.10%	129	<a href="#">gi 75107016</a>	<a href="#">GO!</a>
3	gi 1009434 gid 192 Allergen allergen sin a 1.0104 [Sinapi	Sinapis alba	88.78%	50of50	2.5e-013	80.60%	144	<a href="#">gi 1009434</a>	<a href="#">GO!</a>
4	gi 1009440 gid 192 Allergen allergen sin a 1.0107 [Sinapi	Sinapis alba	88.78%	50of50	2e-013	80.60%	144	<a href="#">gi 1009440</a>	<a href="#">GO!</a>

5	gi 1009438 gid 192 Allergen allergen sin a 1.0106 [Sinapi	Sinapis alba	88.78%	50of50	2.2e-013	79.90%	144	<a href="#">gi 1009438</a>	<a href="#">GO!</a>
6	gi 1009436 gid 192 Allergen allergen sin a 1.0105 [Sinapi	Sinapis alba	88.78%	50of50	2e-013	80.60%	144	<a href="#">gi 1009436</a>	<a href="#">GO!</a>
7	gi 1009442 gid 192 Allergen allergen sin a 1.0108 [Sinapi	Sinapis alba	87.50%	50of50	2.9e-013	79.20%	144	<a href="#">gi 1009442</a>	<a href="#">GO!</a>
8	gi 51338758 gid 192 Allergen Allergen Sin a 1 precursor (	Sinapis alba	87.50%	50of50	5.7e-013	79.90%	144	<a href="#">gi 51338758</a>	<a href="#">GO!</a>
9	gi 17697 gid 1172 Putative 2S storage protein [Brassica r	Brassica rapa	85.00%	50of50	1e-011	77.10%	144	<a href="#">gi 17697</a>	<a href="#">GO!</a>
10	gi 26985163 gid 386 Putative recombinant Ib pronapin prec	Brassica napus	55.00%	50of50	3.8e-006	50.00%	114	<a href="#">gi 26985163</a>	<a href="#">GO!</a>
11	gi 21068 gid 104 Allergen 2S albumin precursor [Ricinus c	Ricinus communis	40.00%	11of50	0.16	34.50%	113	<a href="#">gi 21068</a>	<a href="#">GO!</a>
12	gi 110349081 gid 1270 Putative Pis v 1 allergen 2S albumi	Pistacia vera	38.71%	17of50	0.76	33.90%	115	<a href="#">gi 110349081</a>	<a href="#">GO!</a>
13	gi 170708 gid 152 Allergen gamma-gliadin B precursor	Triticum aestivum	37.80%	11of50	10	25.90%	135	<a href="#">gi 170708</a>	<a href="#">GO!</a>
14	gi 209165427 gid 204 Putative 2S albumin [Sesamum indicum	Sesamum indicum	37.50%	6of50	0.12	33.60%	122	<a href="#">gi 209165427</a>	<a href="#">GO!</a>
15	gi 13183175 gid 204 Putative 2S albumin [Sesamum indicum]	Sesamum indicum	37.50%	6of50	0.091	33.60%	122	<a href="#">gi 13183175</a>	<a href="#">GO!</a>
16	gi 736319 gid 160 Allergen glutenin [Triticum aestivum]	Triticum aestivum	37.30%	2of50	12	32.70%	107	<a href="#">gi 736319</a>	<a href="#">GO!</a>
17	gi 288860106 gid 160 Allergen high molecular weight glute	Triticum aestivum	37.00%	5of50	20	36.80%	87	<a href="#">gi 288860106</a>	<a href="#">GO!</a>
18	gi 75219081 gid 154 Putative LMM glutenin 1	Triticum aestivum	36.90%	7of50	8.4	32.30%	99	<a href="#">gi 75219081</a>	<a href="#">GO!</a>
19	gi 170736 gid 152 Allergen gamma-gliadin	Triticum aestivum	36.80%	10of50	6.9	33.00%	103	<a href="#">gi 170736</a>	<a href="#">GO!</a>
20	gi 508732621 gid 152 Allergen gamma-gliadin, partial [Tri	Triticum aestivum	36.80%	10of50	7.3	33.00%	103	<a href="#">gi 508732621</a>	<a href="#">GO!</a>

21	gi 886967 gid 154 Putative low molecular weight glutenin	Triticum aestivum	36.70%	7of50	21	36.00%	100	<a href="#">gi 886967</a>	<a href="#">GO!</a>
22	gi 508732623 gid 150 Allergen omega-gliadin, partial [Tri	Triticum aestivum	36.60%	3of50	7.6	35.50%	93	<a href="#">gi 508732623</a>	<a href="#">GO!</a>
23	gi 73912496 gid 150 Allergen omega-5 gliadin [Triticum ae	Triticum aestivum	36.50%	9of50	7.5	25.40%	122	<a href="#">gi 73912496</a>	<a href="#">GO!</a>
24	gi 21743 gid 160 Allergen high molecular weight glutenin	Triticum aestivum	36.40%	3of50	7.6	36.40%	88	<a href="#">gi 21743</a>	<a href="#">GO!</a>
25	gi 508732625 gid 160 Allergen high molecular weight glute	Triticum aestivum	36.40%	2of50	7.4	36.40%	88	<a href="#">gi 508732625</a>	<a href="#">GO!</a>
26	gi 886965 gid 154 Putative low molecular weight glutenin	Triticum aestivum	36.40%	3of50	15	36.50%	96	<a href="#">gi 886965</a>	<a href="#">GO!</a>
27	gi 170743 gid 160 Allergen HMW glutenin subunit Ax2* [Tri	Triticum aestivum	36.40%	2of50	7.5	36.40%	88	<a href="#">gi 170743</a>	<a href="#">GO!</a>
28	gi 886963 gid 154 Putative low molecular weight glutenin	Triticum aestivum	36.26%	8of50	8.3	31.00%	116	<a href="#">gi 886963</a>	<a href="#">GO!</a>
29	gi 170738 gid 152 Allergen gamma-gliadin	Triticum aestivum	36.24%	6of50	3.6	27.60%	127	<a href="#">gi 170738</a>	<a href="#">GO!</a>
30	gi 226437844 gid 1383 Allergen 2S albumin [Corylus avella	Corylus avellana	36.24%	2of50	0.054	33.00%	109	<a href="#">gi 226437844</a>	<a href="#">GO!</a>
31	gi 283476402 gid 1617 Putative alpha/beta gliadin precurs	Triticum aestivum	35.90%	4of50	11	29.90%	117	<a href="#">gi 283476402</a>	<a href="#">GO!</a>
32	gi 208605348 gid 150 Allergen D-type LMW glutenin subunit	Triticum aestivum	35.60%	1of50	9.5	28.70%	129	<a href="#">gi 208605348</a>	<a href="#">GO!</a>
33	gi 208605346 gid 150 Allergen D-type LMW glutenin subunit	Triticum aestivum	35.60%	1of50	1	28.50%	130	<a href="#">gi 208605346</a>	<a href="#">GO!</a>
34	gi 75317968 gid 154 Putative LMM glutenin 3	Triticum aestivum	35.03%	1of50	6	31.90%	94	<a href="#">gi 75317968</a>	<a href="#">GO!</a>
35	gi 208605344 gid 150 Allergen D-type LMW glutenin subunit	Triticum aestivum	35.00%	2of50	5.2	31.20%	125	<a href="#">gi 208605344</a>	<a href="#">GO!</a>

Q2TLWO: 11S globulin [Sinapis alba (White mustard)]	
Database	AllergenOnline Database v19 (February 10, 2019)
Input Query	>query MVKLAHLLVATVGVLLVNLGCLARQSLGVPPQVKDACNLNDLVLQPTVEIKSEAGQVEY WDHNHPQIRCAGVSIARLVIQKGGLYLPTFFSSPFISYVVQGMGISGRVIPGCAETFMDS QPMQQGGQQGGQQGGQQGGQQGGQQGGQQGGQQGGQQGGQQGGQQGGQQGGQGRDMHQK VEHVRHGDIAIAMPGSAQWIYNTGDQPLIIIVSLIDIANYQNQLDRNPRTFRLAGNNQQGS SQQQQQQQNIILSGFDPQVLAQALKIDVRLAQELQNQQDKRGNIVRVKGPVFQVVRPPLRQ AYESEQWRHPRGPPQSPQDNGLEETICSMRTHENIDDPARADIYKPNLGRVTSVNSYTLP ILQYIRLSATRGIHQGSAMVLPKYNMNANEIILYCTQGQARIQVVDNDGQNVLDQQVQKGG LVVIPQGFAYVVQSQNNFEWISFKTNANAMISTLAGRTSALRALPLEVITNAYQISLEEA RKIKFNTLETTLTRARGGQQPQLIEEIVEV
Length	510
Number of 80 mers	431
Number of Sequences with hits	90

Hit #	Define	Species	Best %ID	# Hits > 35%	Full Alignment			Links	
					E-val	%ID	length	NCBI	Details
1	gi 62240392 gid 837 Allergen 11S globulin precursor [Sina	Sinapis alba	100.00%	431of431	6.6e-160	92.20%	523	<a href="#">gi 62240392</a>	<a href="#">GO!</a>
2	gi 62240390 gid 837 Allergen 11S globulin precursor [Sina	Sinapis alba	100.00%	431of431	0	100.00%	510	<a href="#">gi 62240390</a>	<a href="#">GO!</a>
3	gi 158998782 gid 2066 Putative 11S legumin protein [Carya	Carya illinoensis	62.51%	351of431	2.6e-061	43.20%	521	<a href="#">gi 158998782</a>	<a href="#">GO!</a>
4	gi 1126299828 gid 2597 Putative legumin [Juglans nigra]	Juglans nigra	62.51%	362of431	2.7e-058	42.00%	528	<a href="#">gi 1126299828</a>	<a href="#">GO!</a>
5	gi 158998780 gid 2066 Putative 11S legumin protein [Carya	Carya illinoensis	61.30%	348of431	3.5e-061	42.80%	521	<a href="#">gi 158998780</a>	<a href="#">GO!</a>
6	gi 56788031 gid 817 Putative seed storage protein [Juglan	Juglans regia	61.30%	363of431	1.2e-061	42.30%	534	<a href="#">gi 56788031</a>	<a href="#">GO!</a>

7	gi 258588247 gid 1572 Putative Chain A, Crystal Structure	Prunus dulcis	60.50%	424of431	2.1e-051	46.70%	522	<a href="#">gi 258588247</a>	<a href="#">GO!</a>
8	gi 307159112 gid 1572 Putative prunin 1 precursor [Prunus	Prunus dulcis	60.50%	431of431	8.3e-052	46.40%	541	<a href="#">gi 307159112</a>	<a href="#">GO!</a>
9	gi 25991543 gid 76 Allergen allergen Ana 0 2 [Anacardium	Anacardium occidentale	60.04%	380of431	2.3e-070	44.80%	498	<a href="#">gi 25991543</a>	<a href="#">GO!</a>
10	gi 288860106 gid 160 Allergen high molecular weight glute	Triticum aestivum	60.00%	84of431	3.5e-018	37.60%	213	<a href="#">gi 288860106</a>	<a href="#">GO!</a>
11	gi 736319 gid 160 Allergen glutenin [Triticum aestivum]	Triticum aestivum	58.50%	79of431	1.9e-013	35.30%	215	<a href="#">gi 736319</a>	<a href="#">GO!</a>
12	gi 18479082 gid 392 Allergen 11S globulin-like protein [C	Corylus avellana	58.00%	387of431	3.6e-061	45.70%	534	<a href="#">gi 18479082</a>	<a href="#">GO!</a>
13	gi 557792009 gid 392 Allergen Cor a 9 allergen [Corylus a	Corylus avellana	58.00%	380of431	1.6e-061	44.90%	534	<a href="#">gi 557792009</a>	<a href="#">GO!</a>
14	gi 307159114 gid 1572 Putative prunin 2 precursor, partia	Prunus dulcis	57.80%	418of431	3e-061	45.60%	522	<a href="#">gi 307159114</a>	<a href="#">GO!</a>
15	gi 82469930 gid 2650 Allergen 11S globulin-like protein [	Actinidia chinensis	57.50%	352of431	2.3e-068	41.40%	503	<a href="#">gi 82469930</a>	<a href="#">GO!</a>
16	gi 523916668 gid 1572 Putative putative Pru du 6 allergen	Prunus dulcis	56.26%	165of431	8.7e-020	47.20%	195	<a href="#">gi 523916668</a>	<a href="#">GO!</a>
17	gi 13183173 gid 2274 Putative 11S globulin [Sesamum indic	Sesamum indicum	55.00%	342of431	3.7e-060	42.10%	470	<a href="#">gi 13183173</a>	<a href="#">GO!</a>
18	gi 156001070 gid 1093 Putative 11S globulin [Pistacia ver	Pistacia vera	55.00%	356of431	6.5e-053	41.80%	505	<a href="#">gi 156001070</a>	<a href="#">GO!</a>
19	gi 110349083 gid 1093 Putative Pis v 2.0101 allergen11S g	Pistacia vera	55.00%	346of431	9.9e-050	41.40%	510	<a href="#">gi 110349083</a>	<a href="#">GO!</a>
20	gi 110349085 gid 1093 Putative Pis v 2.0201 allergen 11S	Pistacia vera	55.00%	356of431	1.2e-052	41.60%	505	<a href="#">gi 110349085</a>	<a href="#">GO!</a>
21	gi 113200131 gid 531 Putative allergenic protein [Fagopyr	Fagopyrum tataricum	55.00%	256of431	1.5e-043	38.10%	486	<a href="#">gi 113200131</a>	<a href="#">GO!</a>
22	gi 18639 gid 733 Putative glycinin subunit G3 [Glycine ma	Glycine max	53.10%	272of431	2e-038	36.20%	514	<a href="#">gi 18639</a>	<a href="#">GO!</a>
23	gi 169973 gid 572 Putative glycinin A-1a-B-x subunit [Gly	Glycine max	52.50%	259of431	6.7e-044	37.30%	518	<a href="#">gi 169973</a>	<a href="#">GO!</a>

24	gi 18615 gid 572 Putative Glycinin-like [Glycine max]	Glycine max	52.50%	259of431	3.6e-044	37.30%	518	<a href="#">gi 18615</a>	<a href="#">GO!</a>
25	gi 30313867 gid 347 Putative 11S globulin [Bertholletia e	Bertholletia excelsa	52.50%	318of431	5.8e-059	39.20%	510	<a href="#">gi 30313867</a>	<a href="#">GO!</a>
26	gi 29839255 gid 531 Putative 13S globulin seed storage pr	Fagopyrum esculentum	51.20%	229of431	1.3e-040	36.10%	477	<a href="#">gi 29839255</a>	<a href="#">GO!</a>
27	gi 21779 gid 160 Allergen HMW glutenin-like protein produ	Triticum aestivum	50.60%	76of431	2.8e-008	27.80%	410	<a href="#">gi 21779</a>	<a href="#">GO!</a>
28	gi 18609 gid 732 Putative Glycinin A2B1a subunit-like [Gl	Glycine max	50.00%	234of431	1.1e-028	35.70%	504	<a href="#">gi 18609</a>	<a href="#">GO!</a>
29	gi 29839254 gid 531 Putative 13S globulin seed storage pr	Fagopyrum esculentum	50.00%	246of431	1e-041	35.60%	506	<a href="#">gi 29839254</a>	<a href="#">GO!</a>
30	gi 218265 gid 732 Putative glycinin A2B1a subunit [Glycin	Glycine max	50.00%	234of431	1.1e-028	35.70%	504	<a href="#">gi 218265</a>	<a href="#">GO!</a>
31	gi 29839419 gid 531 Putative 13S globulin seed storage pr	Fagopyrum esculentum	50.00%	248of431	1.2e-034	37.00%	487	<a href="#">gi 29839419</a>	<a href="#">GO!</a>
32	gi 71084277 gid 160 Allergen HMW glutenin x-type subunit	Triticum aestivum	50.00%	83of431	7.2e-011	35.20%	250	<a href="#">gi 71084277</a>	<a href="#">GO!</a>
33	gi 3703107 gid 291 Allergen glycinin [Arachis hypogaea]	Arachis hypogaea	49.40%	173of431	2.7e-025	32.70%	513	<a href="#">gi 3703107</a>	<a href="#">GO!</a>
34	gi 5381325 gid 2273 Allergen 11S globulin precursor [Sesa	Sesamum indicum	49.40%	225of431	9.2e-052	34.60%	503	<a href="#">gi 5381325</a>	<a href="#">GO!</a>
35	gi 22135348 gid 291 Allergen trypsin inhibitor [Arachis h	Arachis hypogaea	49.40%	80of431	1.8e-013	33.70%	243	<a href="#">gi 22135348</a>	<a href="#">GO!</a>
36	gi 21314465 gid 291 Allergen allergen Arah3/Arah4 [Arachi	Arachis hypogaea	49.40%	246of431	3e-013	33.80%	550	<a href="#">gi 21314465</a>	<a href="#">GO!</a>
37	gi 10566449 gid 574 Putative glycinin A3B4 subunit [Glyci	Glycine max	48.78%	229of431	2.1e-027	32.70%	547	<a href="#">gi 10566449</a>	<a href="#">GO!</a>
38	gi 21743 gid 160 Allergen high molecular weight glutenin	Triticum aestivum	48.75%	69of431	3.2e-012	35.40%	229	<a href="#">gi 21743</a>	<a href="#">GO!</a>
39	gi 5712199 gid 291 Allergen glycinin [Arachis hypogaea]	Arachis hypogaea	48.70%	162of431	2.8e-023	32.30%	539	<a href="#">gi 5712199</a>	<a href="#">GO!</a>
40	gi 224036293 gid 291 Allergen Chain A, Crystal Structure	Arachis hypogaea	48.70%	190of431	1.4e-026	33.10%	513	<a href="#">gi 224036293</a>	<a href="#">GO!</a>



41	gi 199732457 gid 291 Allergen arachin Arah3 isoform [Arac	Arachis hypogaea	48.70%	190of431	1.4e-026	32.80%	539	<a href="#">gi 199732457</a>	<a href="#">GO!</a>
42	gi 806556 gid 573 Putative A5A4B3 subunit [Glycine soja]	Glycine soja	48.10%	243of431	4.7e-028	31.00%	581	<a href="#">gi 806556</a>	<a href="#">GO!</a>
43	gi 18641 gid 573 Putative glycinin [Glycine max]	Glycine max	48.10%	227of431	3.4e-028	30.50%	581	<a href="#">gi 18641</a>	<a href="#">GO!</a>
44	gi 4249568 gid 573 Putative glycinin [Glycine max]	Glycine max	48.10%	243of431	3.4e-028	31.00%	581	<a href="#">gi 4249568</a>	<a href="#">GO!</a>
45	gi 22090 gid 160 Allergen HMW glutenin subunit 1By9 [Trit	Triticum aestivum	48.10%	76of431	2.1e-011	30.80%	318	<a href="#">gi 22090</a>	<a href="#">GO!</a>
46	gi 21751 gid 160 Allergen high molecular weight glutenin	Triticum aestivum	47.60%	74of431	1.7e-008	30.30%	297	<a href="#">gi 21751</a>	<a href="#">GO!</a>
47	gi 508732625 gid 160 Allergen high molecular weight glute	Triticum aestivum	47.52%	66of431	1.4e-012	35.40%	229	<a href="#">gi 508732625</a>	<a href="#">GO!</a>
48	gi 170743 gid 160 Allergen HMW glutenin subunit Ax2* [Tri	Triticum aestivum	47.52%	66of431	1.4e-012	35.40%	229	<a href="#">gi 170743</a>	<a href="#">GO!</a>
49	gi 732706 gid 573 Putative Glycinin-like protein product	Glycine max	46.90%	221of431	8.8e-028	30.50%	580	<a href="#">gi 732706</a>	<a href="#">GO!</a>
50	gi 169971 gid 574 Putative glycinin precursor	Glycine max	46.30%	115of431	6.2e-027	38.70%	191	<a href="#">gi 169971</a>	<a href="#">GO!</a>
51	gi 584592120 gid 2481 Putative 13S globulin [Fagopyrum es	Fagopyrum esculentum	46.30%	242of431	5.4e-027	33.90%	496	<a href="#">gi 584592120</a>	<a href="#">GO!</a>
52	gi 169969 gid 574 Putative glycinin	Glycine max	46.30%	215of431	1.3e-015	32.00%	547	<a href="#">gi 169969</a>	<a href="#">GO!</a>
53	gi 584592116 gid 2481 Putative 13S globulin [Fagopyrum es	Fagopyrum esculentum	46.30%	247of431	5.4e-027	34.10%	496	<a href="#">gi 584592116</a>	<a href="#">GO!</a>
54	gi 312233065 gid 291 Allergen Ara h 3 allergen [Arachis h	Arachis hypogaea	46.22%	192of431	4.8e-026	32.70%	517	<a href="#">gi 312233065</a>	<a href="#">GO!</a>
55	gi 112380623 gid 291 Allergen iso-Ara h3 [Arachis hypogae	Arachis hypogaea	46.22%	195of431	1.4e-026	32.90%	517	<a href="#">gi 112380623</a>	<a href="#">GO!</a>
56	gi 21930 gid 154 Putative LMW glutenin [Triticum turgidum	Triticum turgidum subsp. durum	43.74%	44of431	1.9e-006	29.00%	176	<a href="#">gi 21930</a>	<a href="#">GO!</a>
57	gi 170732 gid 154 Putative gamma-gliadin	Triticum aestivum	43.74%	42of431	5.7e-006	47.90%	73	<a href="#">gi 170732</a>	<a href="#">GO!</a>

58	gi 170730 gid 154 Putative pre-gamma-gliadin B-I	Triticum aestivum	43.74%	42of431	5.2e-006	47.90%	73	<a href="#">gi 170730</a>	<a href="#">GO!</a>
59	gi 62550933 gid 154 Putative putative LMW-glutenin subuni	Triticum aestivum	43.73%	48of431	0.0011	50.70%	69	<a href="#">gi 62550933</a>	<a href="#">GO!</a>
60	gi 283476402 gid 1617 Putative alpha/beta gliadin precurs	Triticum aestivum	42.54%	40of431	9.5e-005	43.60%	78	<a href="#">gi 283476402</a>	<a href="#">GO!</a>
61	gi 21926 gid 154 Putative glutenin-like protein product [	Triticum turgidum subsp. durum	42.50%	40of431	7.4e-005	27.30%	176	<a href="#">gi 21926</a>	<a href="#">GO!</a>
62	gi 75317968 gid 154 Putative LMM glutenin 3	Triticum aestivum	41.25%	18of431	7.3e-005	42.70%	75	<a href="#">gi 75317968</a>	<a href="#">GO!</a>
63	gi 75219081 gid 154 Putative LMM glutenin 1	Triticum aestivum	41.23%	36of431	1.5e-005	27.20%	173	<a href="#">gi 75219081</a>	<a href="#">GO!</a>
64	gi 208605348 gid 150 Allergen D-type LMW glutenin subunit	Triticum aestivum	40.70%	45of431	2e-006	29.00%	245	<a href="#">gi 208605348</a>	<a href="#">GO!</a>
65	gi 208605346 gid 150 Allergen D-type LMW glutenin subunit	Triticum aestivum	40.70%	45of431	1.5e-006	30.00%	207	<a href="#">gi 208605346</a>	<a href="#">GO!</a>
66	gi 897811 gid 160 Allergen HMW gluten-like protein produc	Triticum aestivum	39.98%	47of431	2.3e-006	48.40%	64	<a href="#">gi 897811</a>	<a href="#">GO!</a>
67	gi 21757 gid 151 Allergen Gliadin-like protein product [T	Triticum aestivum	39.96%	24of431	0.00026	31.30%	163	<a href="#">gi 21757</a>	<a href="#">GO!</a>
68	gi 170722 gid 151 Allergen pre-alpha-/beta-gliadin A-I	Triticum aestivum	39.50%	22of431	0.0001	29.80%	188	<a href="#">gi 170722</a>	<a href="#">GO!</a>
69	gi 170736 gid 152 Allergen gamma-gliadin	Triticum aestivum	38.80%	29of431	0.0094	29.60%	206	<a href="#">gi 170736</a>	<a href="#">GO!</a>
70	gi 508732621 gid 152 Allergen gamma-gliadin, partial [Tri	Triticum aestivum	38.80%	29of431	0.0057	29.40%	218	<a href="#">gi 508732621</a>	<a href="#">GO!</a>
71	gi 21673 gid 151 Allergen Alpha/beta gliadin-like protein	Triticum aestivum	38.78%	30of431	1.3e-006	30.20%	182	<a href="#">gi 21673</a>	<a href="#">GO!</a>
72	gi 21761 gid 151 Allergen Gliadin-like protein product [T	Triticum aestivum	37.80%	15of431	0.00029	30.00%	180	<a href="#">gi 21761</a>	<a href="#">GO!</a>
73	gi 170738 gid 152 Allergen gamma-gliadin	Triticum aestivum	37.54%	38of431	0.1	30.90%	178	<a href="#">gi 170738</a>	<a href="#">GO!</a>
74	gi 73912496 gid 150 Allergen omega-5 gliadin [Triticum ae	Triticum aestivum	37.54%	31of431	2.3e-006	30.60%	219	<a href="#">gi 73912496</a>	<a href="#">GO!</a>
75	gi 170708 gid 152 Allergen gamma-gliadin B precursor	Triticum aestivum	37.54%	4of431	0.27	28.60%	182	<a href="#">gi 170708</a>	<a href="#">GO!</a>

76	gi 1137166044 gid 151 Allergen alpha-gliadin, partial [Tr	Triticum monococcum subsp. aegilopoides	37.54%	43of431	1.9e-006	30.90%	191	<a href="#">gi 1137166044</a>	<a href="#">GO!</a>
77	gi 170740 gid 151 Allergen gliadin	Triticum urartu	37.50%	25of431	0.0005	30.20%	192	<a href="#">gi 170740</a>	<a href="#">GO!</a>
78	gi 21765 gid 151 Allergen Gliadin-like protein product [T	Triticum aestivum	36.29%	28of431	2.5e-006	28.80%	208	<a href="#">gi 21765</a>	<a href="#">GO!</a>
79	gi 170718 gid 151 Allergen alpha/beta-gliadin precursor	Triticum aestivum	36.29%	28of431	1.8e-006	28.80%	208	<a href="#">gi 170718</a>	<a href="#">GO!</a>
80	gi 21783 gid 154 Putative LMW glutenin-like protein produ	Triticum aestivum	36.27%	28of431	9.4e-005	50.90%	57	<a href="#">gi 21783</a>	<a href="#">GO!</a>
81	gi 21755 gid 151 Allergen Alpha/beta gliadin-like protein	Triticum aestivum	36.24%	15of431	0.00016	28.70%	181	<a href="#">gi 21755</a>	<a href="#">GO!</a>
82	gi 170720 gid 151 Allergen alpha/beta-gliadin precursor [	Triticum aestivum	36.24%	15of431	0.00016	28.70%	181	<a href="#">gi 170720</a>	<a href="#">GO!</a>
83	gi 170702 gid 152 Allergen gamma gliadin precursor	Triticum aestivum	36.24%	21of431	0.0064	29.10%	151	<a href="#">gi 170702</a>	<a href="#">GO!</a>
84	gi 508732623 gid 150 Allergen omega-gliadin, partial [Tri	Triticum aestivum	36.22%	32of431	0.16	27.70%	202	<a href="#">gi 508732623</a>	<a href="#">GO!</a>
85	gi 170734 gid 154 Putative gamma gliadin B-III	Triticum aestivum	35.03%	29of431	0.00033	51.90%	54	<a href="#">gi 170734</a>	<a href="#">GO!</a>
86	gi 508732627 gid 154 Putative low molecular weight gluten	Triticum aestivum	35.03%	29of431	0.0004	51.90%	54	<a href="#">gi 508732627</a>	<a href="#">GO!</a>
87	gi 21773 gid 154 Putative LMW glutenin-like protein produ	Triticum aestivum	35.03%	29of431	0.00044	51.90%	54	<a href="#">gi 21773</a>	<a href="#">GO!</a>
88	gi 335331566 gid 154 Putative low molecular weight gluten	Triticum aestivum	35.03%	1of431	0.0027	23.80%	323	<a href="#">gi 335331566</a>	<a href="#">GO!</a>
89	gi 170712 gid 151 Allergen pre-alpha-/beta-gliadin A-II	Triticum aestivum	35.00%	2of431	6.8e-006	28.40%	176	<a href="#">gi 170712</a>	<a href="#">GO!</a>
90	gi 170724 gid 151 Allergen pre-alpha-/beta-gliadin A-IV	Triticum aestivum	35.00%	2of431	2.7e-006	29.00%	176	<a href="#">gi 170724</a>	<a href="#">GO!</a>

<b>Q7XB53: Cruciferin (Fragment) [Brassica napus (Rape)]</b>	
<b>Database</b>	AllergenOnline Database v19 (February 10, 2019)
<b>Input Query</b>	>query QQFPNECQLDQLNALEP SHVLKAEAGRIEVDHHPQLRCSGVSFVRYIIESKGLYLPSF FSTAKLSFVAKGEGLMGRVVP GCAETFQDSSVFQPGGGS PFGEQGQQGQQGQGHQGG QGQQGQQGQQGQQSQQGQFRDMHQKVEHIRTGDTIATHPGVAQWFYNDGNQPLVIVSVLD LASHQNQLDRNPRPFYLAGNNPQQGVWIEGREQQPQKNILNGFTPEVLAKAFKIDVRTAQ QLQNQQDNRGNI IRVQGPFSVIRPPLRSQRPQEEVNGLEETICSARCTDNLDDPSNADVY KPQLGYISTLNSYDLPILRFLRLSALRGSIRQNAMVLPQWNANANAVLYVTDGEAHVQVV NDNGDRVFDGQVSQQGQLLSIPQGFVSVKRATSEQFRWIEFKTNANAQINTLAGRTSVLRG LPLEVISNGYQISLEEARRVKFNTIETTLTHSSGPASYGGPRKADA
<b>Length</b>	466
<b>Number of 80 mers</b>	387
<b>Number of Sequences with hits</b>	57

Hit #	Defline	Species	Best %ID	# Hits > 35%	Full Alignment			Links	
					E-val	%ID	length	NCBI	Details
1	gi 62240390 gid 837 Allergen 11S globulin precursor [Sina	Sinapis alba	76.50%	387of387	3.5e-029	61.00%	472	<a href="#">gi 62240390</a>	<a href="#">GO!</a>
2	gi 62240392 gid 837 Allergen 11S globulin precursor [Sina	Sinapis alba	74.10%	387of387	1.7e-017	59.20%	483	<a href="#">gi 62240392</a>	<a href="#">GO!</a>
3	gi 557792009 gid 392 Allergen Cor a 9 allergen [Corylus a	Corylus avellana	63.70%	353of387	9.4e-022	44.00%	509	<a href="#">gi 557792009</a>	<a href="#">GO!</a>
4	gi 18479082 gid 392 Allergen 11S globulin-like protein [C	Corylus avellana	63.70%	373of387	1.7e-021	45.20%	500	<a href="#">gi 18479082</a>	<a href="#">GO!</a>
5	gi 523916668 gid 1572 Putative putative Pru du 6 allergen	Prunus dulcis	62.51%	160of387	3.2e-010	48.20%	193	<a href="#">gi 523916668</a>	<a href="#">GO!</a>
6	gi 307159114 gid 1572 Putative prunin 2 precursor, partia	Prunus dulcis	62.51%	387of387	4.3e-020	45.90%	488	<a href="#">gi 307159114</a>	<a href="#">GO!</a>
7	gi 25991543 gid 76 Allergen allergen Ana 0 2 [Anacardium	Anacardium occidentale	61.30%	333of387	1.2e-022	44.70%	474	<a href="#">gi 25991543</a>	<a href="#">GO!</a>
8	gi 1126299828 gid 2597 Putative legumin [Juglans nigra]	Juglans nigra	58.79%	298of387	3.8e-021	42.70%	503	<a href="#">gi 1126299828</a>	<a href="#">GO!</a>

9	gi 158998782 gid 2066 Putative 11S legumin protein [Carya	Carya illinoensis	58.79%	326of387	3.1e-021	43.50%	506	<a href="#">gi 158998782</a>	<a href="#">GO!</a>
10	gi 307159112 gid 1572 Putative prunin 1 precursor [Prunus	Prunus dulcis	58.79%	373of387	2.5e-020	44.30%	515	<a href="#">gi 307159112</a>	<a href="#">GO!</a>
11	gi 158998780 gid 2066 Putative 11S legumin protein [Carya	Carya illinoensis	58.79%	326of387	3.4e-021	43.50%	506	<a href="#">gi 158998780</a>	<a href="#">GO!</a>
12	gi 258588247 gid 1572 Putative Chain A, Crystal Structure	Prunus dulcis	58.79%	365of387	2.2e-020	44.10%	515	<a href="#">gi 258588247</a>	<a href="#">GO!</a>
13	gi 56788031 gid 817 Putative seed storage protein [Juglan	Juglans regia	57.52%	325of387	4.4e-021	42.90%	513	<a href="#">gi 56788031</a>	<a href="#">GO!</a>
14	gi 110349085 gid 1093 Putative Pis v 2.0201 allergen 11S	Pistacia vera	56.30%	347of387	1.7e-033	41.60%	459	<a href="#">gi 110349085</a>	<a href="#">GO!</a>
15	gi 156001070 gid 1093 Putative 11S globulin [Pistacia ver	Pistacia vera	56.30%	338of387	3.2e-033	41.40%	459	<a href="#">gi 156001070</a>	<a href="#">GO!</a>
16	gi 82469930 gid 2650 Allergen 11S globulin-like protein [	Actinidia chinensis	56.30%	314of387	3.5e-036	42.90%	466	<a href="#">gi 82469930</a>	<a href="#">GO!</a>
17	gi 113200131 gid 531 Putative allergenic protein [Fagopyr	Fagopyrum tataricum	55.00%	297of387	5.5e-029	40.70%	474	<a href="#">gi 113200131</a>	<a href="#">GO!</a>
18	gi 110349083 gid 1093 Putative Pis v 2.0101 allergen11S g	Pistacia vera	55.00%	313of387	1.6e-025	40.90%	470	<a href="#">gi 110349083</a>	<a href="#">GO!</a>
19	gi 29839255 gid 531 Putative 13S globulin seed storage pr	Fagopyrum esculentum	55.00%	249of387	9.3e-027	39.50%	466	<a href="#">gi 29839255</a>	<a href="#">GO!</a>
20	gi 30313867 gid 347 Putative 11S globulin [Bertholletia e	Bertholletia excelsa	53.80%	349of387	1.2e-024	43.30%	466	<a href="#">gi 30313867</a>	<a href="#">GO!</a>
21	gi 18639 gid 733 Putative glycinin subunit G3 [Glycine ma	Glycine max	53.80%	274of387	4.8e-022	38.00%	479	<a href="#">gi 18639</a>	<a href="#">GO!</a>
22	gi 29839419 gid 531 Putative 13S globulin seed storage pr	Fagopyrum esculentum	53.80%	231of387	9.8e-017	39.30%	476	<a href="#">gi 29839419</a>	<a href="#">GO!</a>
23	gi 29839254 gid 531 Putative 13S globulin seed storage pr	Fagopyrum esculentum	53.80%	217of387	6.6e-017	37.50%	506	<a href="#">gi 29839254</a>	<a href="#">GO!</a>
24	gi 18615 gid 572 Putative Glycinin-like [Glycine max]	Glycine max	52.54%	259of387	1.4e-016	37.80%	490	<a href="#">gi 18615</a>	<a href="#">GO!</a>
25	gi 169973 gid 572 Putative glycinin A-1a-B-x subunit [Gly	Glycine max	52.54%	259of387	1.3e-016	37.80%	490	<a href="#">gi 169973</a>	<a href="#">GO!</a>

26	gi 806556 gid 573 Putative A5A4B3 subunit [Glycine soja]	Glycine soja	52.50%	230of387	3.5e-014	32.00%	569	<a href="#">gi 806556</a>	<a href="#">GO!</a>
27	gi 10566449 gid 574 Putative glycinin A3B4 subunit [Glyci	Glycine max	52.50%	231of387	4.8e-013	34.40%	514	<a href="#">gi 10566449</a>	<a href="#">GO!</a>
28	gi 4249568 gid 573 Putative glycinin [Glycine max]	Glycine max	52.50%	230of387	4.6e-014	32.30%	569	<a href="#">gi 4249568</a>	<a href="#">GO!</a>
29	gi 71084277 gid 160 Allergen HMW glutenin x-type subunit	Triticum aestivum	52.50%	65of387	0.97	32.80%	198	<a href="#">gi 71084277</a>	<a href="#">GO!</a>
30	gi 732706 gid 573 Putative Glycinin-like protein product	Glycine max	52.50%	213of387	1.1e-014	31.90%	568	<a href="#">gi 732706</a>	<a href="#">GO!</a>
31	gi 18641 gid 573 Putative glycinin [Glycine max]	Glycine max	52.50%	230of387	4.6e-014	32.20%	569	<a href="#">gi 18641</a>	<a href="#">GO!</a>
32	gi 169971 gid 574 Putative glycinin precursor	Glycine max	52.50%	120of387	4e-013	39.90%	188	<a href="#">gi 169971</a>	<a href="#">GO!</a>
33	gi 13183173 gid 2274 Putative 11S globulin [Sesamum indic	Sesamum indicum	52.46%	318of387	1.6e-024	40.80%	476	<a href="#">gi 13183173</a>	<a href="#">GO!</a>
34	gi 218265 gid 732 Putative glycinin A2B1a subunit [Glycin	Glycine max	51.29%	215of387	3.4e-022	35.90%	485	<a href="#">gi 218265</a>	<a href="#">GO!</a>
35	gi 18609 gid 732 Putative Glycinin A2B1a subunit-like [Gl	Glycine max	51.29%	215of387	3.4e-022	35.90%	485	<a href="#">gi 18609</a>	<a href="#">GO!</a>
36	gi 288860106 gid 160 Allergen high molecular weight glute	Triticum aestivum	50.00%	74of387	0.0066	32.40%	225	<a href="#">gi 288860106</a>	<a href="#">GO!</a>
37	gi 3703107 gid 291 Allergen glycinin [Arachis hypogaea]	Arachis hypogaea	49.40%	185of387	4.5e-014	33.30%	532	<a href="#">gi 3703107</a>	<a href="#">GO!</a>
38	gi 22135348 gid 291 Allergen trypsin inhibitor [Arachis h	Arachis hypogaea	49.40%	59of387	1.9e-005	35.80%	204	<a href="#">gi 22135348</a>	<a href="#">GO!</a>
39	gi 21314465 gid 291 Allergen allergen Arah3/Arah4 [Arachi	Arachis hypogaea	49.40%	223of387	2.2e-014	34.80%	520	<a href="#">gi 21314465</a>	<a href="#">GO!</a>
40	gi 736319 gid 160 Allergen glutenin [Triticum aestivum]	Triticum aestivum	48.80%	73of387	0.0014	30.10%	229	<a href="#">gi 736319</a>	<a href="#">GO!</a>
41	gi 169969 gid 574 Putative glycinin	Glycine max	48.78%	214of387	1.7e-006	33.10%	514	<a href="#">gi 169969</a>	<a href="#">GO!</a>
42	gi 312233065 gid 291 Allergen Ara h 3 allergen [Arachis h	Arachis hypogaea	48.70%	207of387	1.5e-015	36.10%	487	<a href="#">gi 312233065</a>	<a href="#">GO!</a>
43	gi 112380623 gid 291 Allergen iso-Ara h3 [Arachis hypogae	Arachis hypogaea	48.70%	213of387	8.2e-016	36.30%	487	<a href="#">gi 112380623</a>	<a href="#">GO!</a>
44	gi 5712199 gid 291 Allergen glycinin [Arachis hypogaea]	Arachis hypogaea	46.30%	156of387	3.2e-013	32.40%	512	<a href="#">gi 5712199</a>	<a href="#">GO!</a>



	YESEQWRHPRGPPQSPQDNGLLEETICSMRTHENIDDPARADVYPKPNLGRVTSVNSYTLPI LQYIRLSATRGI LQGNAMVLPKYNMNANEILYCTQGQARIQVVDNNGQNVLDQQVQKGGQL VVI PQGFAYVVQSHQNNFEWISFKTNANAMVSTLAGRTSALRALPLEVITNAFQISLEEA RRIKFNTLETTLTRARGGQPQLIEEIVEA
<b>Length</b>	509
<b>Number of 80 mers</b>	430
<b>Number of Sequences with hits</b>	86

Hit #	Defline	Species	Best %ID	# Hits > 35%	Full Alignment			Links	
					E-val	%ID	length	NCBI	Details
1	gi 62240390 gid 837 Allergen 11S globulin precursor [Sina	Sinapis alba	98.80%	430of430	2.4e-210	91.60%	510	<a href="#">gi 62240390</a>	<a href="#">GO!</a>
2	gi 62240392 gid 837 Allergen 11S globulin precursor [Sina	Sinapis alba	97.50%	430of430	2.7e-157	90.10%	523	<a href="#">gi 62240392</a>	<a href="#">GO!</a>
3	gi 158998782 gid 2066 Putative 11S legumin protein [Carya	Carya illinoensis	65.00%	358of430	1.9e-061	44.70%	535	<a href="#">gi 158998782</a>	<a href="#">GO!</a>
4	gi 158998780 gid 2066 Putative 11S legumin protein [Carya	Carya illinoensis	65.00%	355of430	7.2e-062	44.50%	535	<a href="#">gi 158998780</a>	<a href="#">GO!</a>
5	gi 1126299828 gid 2597 Putative legumin [Juglans nigra]	Juglans nigra	63.79%	373of430	4.1e-061	43.30%	533	<a href="#">gi 1126299828</a>	<a href="#">GO!</a>
6	gi 56788031 gid 817 Putative seed storage protein [Juglan	Juglans regia	63.79%	368of430	1e-063	44.50%	533	<a href="#">gi 56788031</a>	<a href="#">GO!</a>
7	gi 523916668 gid 1572 Putative putative Pru du 6 allergen	Prunus dulcis	60.04%	168of430	4.6e-020	49.70%	195	<a href="#">gi 523916668</a>	<a href="#">GO!</a>
8	gi 25991543 gid 76 Allergen allergen Ana 0 2 [Anacardium	Anacardium occidentale	60.04%	379of430	7.9e-073	46.20%	487	<a href="#">gi 25991543</a>	<a href="#">GO!</a>
9	gi 307159114 gid 1572 Putative prunin 2 precursor, partia	Prunus dulcis	60.04%	425of430	5.6e-040	47.00%	513	<a href="#">gi 307159114</a>	<a href="#">GO!</a>
10	gi 18479082 gid 392 Allergen 11S globulin-like protein [C	Corylus avellana	58.79%	394of430	7.4e-062	45.60%	528	<a href="#">gi 18479082</a>	<a href="#">GO!</a>
11	gi 557792009 gid 392 Allergen Cor a 9 allergen [Corylus a	Corylus avellana	58.79%	391of430	4.6e-062	45.50%	528	<a href="#">gi 557792009</a>	<a href="#">GO!</a>



12	gi 258588247 gid 1572 Putative Chain A, Crystal Structure	Prunus dulcis	58.40%	423of430	1e-050	46.30%	521	<a href="#">gi 258588247</a>	GO!
13	gi 307159112 gid 1572 Putative prunin 1 precursor [Prunus	Prunus dulcis	58.40%	430of430	4e-051	46.10%	536	<a href="#">gi 307159112</a>	GO!
14	gi 82469930 gid 2650 Allergen 11S globulin-like protein [	Actinidia chinensis	56.30%	327of430	3.5e-069	41.40%	500	<a href="#">gi 82469930</a>	GO!
15	gi 736319 gid 160 Allergen glutenin [Triticum aestivum]	Triticum aestivum	56.26%	70of430	2.5e-011	33.30%	207	<a href="#">gi 736319</a>	GO!
16	gi 288860106 gid 160 Allergen high molecular weight glute	Triticum aestivum	55.60%	79of430	8e-015	34.80%	224	<a href="#">gi 288860106</a>	GO!
17	gi 110349083 gid 1093 Putative Pis v 2.0101 allergen11S g	Pistacia vera	55.00%	345of430	6.7e-051	41.10%	518	<a href="#">gi 110349083</a>	GO!
18	gi 156001070 gid 1093 Putative 11S globulin [Pistacia ver	Pistacia vera	55.00%	361of430	4.8e-055	41.90%	513	<a href="#">gi 156001070</a>	GO!
19	gi 110349085 gid 1093 Putative Pis v 2.0201 allergen 11S	Pistacia vera	55.00%	359of430	9.1e-055	41.70%	513	<a href="#">gi 110349085</a>	GO!
20	gi 71084277 gid 160 Allergen HMW glutenin x-type subunit	Triticum aestivum	55.00%	75of430	1.2e-010	34.10%	252	<a href="#">gi 71084277</a>	GO!
21	gi 13183173 gid 2274 Putative 11S globulin [Sesamum indic	Sesamum indicum	53.80%	343of430	4.8e-063	42.10%	478	<a href="#">gi 13183173</a>	GO!
22	gi 113200131 gid 531 Putative allergenic protein [Fagopyr	Fagopyrum tataricum	53.80%	255of430	4.4e-044	35.60%	523	<a href="#">gi 113200131</a>	GO!
23	gi 30313867 gid 347 Putative 11S globulin [Bertholletia e	Bertholletia excelsa	52.50%	309of430	2.3e-059	39.70%	506	<a href="#">gi 30313867</a>	GO!
24	gi 10566449 gid 574 Putative glycinin A3B4 subunit [Glyci	Glycine max	51.25%	264of430	1.6e-028	34.40%	546	<a href="#">gi 10566449</a>	GO!
25	gi 29839254 gid 531 Putative 13S globulin seed storage pr	Fagopyrum esculentum	51.25%	240of430	1.1e-042	34.60%	540	<a href="#">gi 29839254</a>	GO!
26	gi 18639 gid 733 Putative glycinin subunit G3 [Glycine ma	Glycine max	51.20%	267of430	3e-039	36.00%	516	<a href="#">gi 18639</a>	GO!
27	gi 806556 gid 573 Putative A5A4B3 subunit [Glycine soja]	Glycine soja	50.60%	256of430	3.7e-029	31.70%	580	<a href="#">gi 806556</a>	GO!
28	gi 4249568 gid 573 Putative glycinin [Glycine max]	Glycine max	50.60%	256of430	2.7e-029	31.70%	580	<a href="#">gi 4249568</a>	GO!

29	gi 18641 gid 573 Putative glycinin [Glycine max]	Glycine max	50.60%	239of430	2.7e-029	31.40%	580	<a href="#">gi 18641</a>	GO!
30	gi 22090 gid 160 Allergen HMW glutenin subunit 1By9 [Trit	Triticum aestivum	50.02%	69of430	1e-010	30.60%	222	<a href="#">gi 22090</a>	GO!
31	gi 508732625 gid 160 Allergen high molecular weight glute	Triticum aestivum	50.00%	70of430	6.7e-012	31.50%	267	<a href="#">gi 508732625</a>	GO!
32	gi 29839255 gid 531 Putative 13S globulin seed storage pr	Fagopyrum esculentum	50.00%	213of430	3.2e-041	34.20%	512	<a href="#">gi 29839255</a>	GO!
33	gi 170743 gid 160 Allergen HMW glutenin subunit Ax2* [Tri	Triticum aestivum	50.00%	70of430	6.9e-012	31.50%	267	<a href="#">gi 170743</a>	GO!
34	gi 169973 gid 572 Putative glycinin A-1a-B-x subunit [Gly	Glycine max	50.00%	267of430	2.3e-046	37.10%	517	<a href="#">gi 169973</a>	GO!
35	gi 18615 gid 572 Putative Glycinin-like [Glycine max]	Glycine max	50.00%	267of430	1.2e-046	37.10%	517	<a href="#">gi 18615</a>	GO!
36	gi 29839419 gid 531 Putative 13S globulin seed storage pr	Fagopyrum esculentum	50.00%	236of430	2.1e-044	36.80%	486	<a href="#">gi 29839419</a>	GO!
37	gi 169969 gid 574 Putative glycinin	Glycine max	50.00%	242of430	6.3e-015	33.50%	546	<a href="#">gi 169969</a>	GO!
38	gi 21743 gid 160 Allergen high molecular weight glutenin	Triticum aestivum	50.00%	69of430	3.7e-012	31.80%	267	<a href="#">gi 21743</a>	GO!
39	gi 732706 gid 573 Putative Glycinin-like protein product	Glycine max	49.40%	237of430	1.1e-028	31.30%	579	<a href="#">gi 732706</a>	GO!
40	gi 21751 gid 160 Allergen high molecular weight glutenin	Triticum aestivum	48.78%	71of430	1.3e-009	30.50%	266	<a href="#">gi 21751</a>	GO!
41	gi 218265 gid 732 Putative glycinin A2B1a subunit [Glycin	Glycine max	48.70%	244of430	1.4e-029	35.40%	503	<a href="#">gi 218265</a>	GO!
42	gi 18609 gid 732 Putative Glycinin A2B1a subunit-like [Gl	Glycine max	48.70%	244of430	1.4e-029	35.40%	503	<a href="#">gi 18609</a>	GO!
43	gi 5381325 gid 2273 Allergen 11S globulin precursor [Sesa	Sesamum indicum	48.10%	238of430	5.9e-054	35.00%	503	<a href="#">gi 5381325</a>	GO!
44	gi 224036293 gid 291 Allergen Chain A, Crystal Structure	Arachis hypogaea	47.50%	187of430	6.1e-027	32.70%	511	<a href="#">gi 224036293</a>	GO!
45	gi 199732457 gid 291 Allergen arachin Arah3 isoform [Arac	Arachis hypogaea	47.50%	187of430	6.4e-027	32.70%	511	<a href="#">gi 199732457</a>	GO!

46	gi 21314465 gid 291 Allergen allergen Arah3/Arah4 [Arachi	Arachis hypogaea	47.50%	219of430	2.1e-025	33.20%	548	gi 21314465	GO!
47	gi 169971 gid 574 Putative glycinin precursor	Glycine max	47.50%	116of430	4.9e-028	39.80%	191	gi 169971	GO!
48	gi 5712199 gid 291 Allergen glycinin [Arachis hypogaea]	Arachis hypogaea	47.50%	145of430	1.5e-023	31.70%	511	gi 5712199	GO!
49	gi 22135348 gid 291 Allergen trypsin inhibitor [Arachis h	Arachis hypogaea	47.50%	77of430	3.1e-014	34.70%	242	gi 22135348	GO!
50	gi 21779 gid 160 Allergen HMW glutenin-like protein produ	Triticum aestivum	47.50%	68of430	1.2e-006	26.60%	418	gi 21779	GO!
51	gi 3703107 gid 291 Allergen glycinin [Arachis hypogaea]	Arachis hypogaea	46.90%	174of430	1.2e-025	32.10%	511	gi 3703107	GO!
52	gi 584592120 gid 2481 Putative 13S globulin [Fagopyrum es	Fagopyrum esculentum	46.30%	218of430	3.1e-028	34.10%	496	gi 584592120	GO!
53	gi 584592116 gid 2481 Putative 13S globulin [Fagopyrum es	Fagopyrum esculentum	46.30%	228of430	3.1e-028	34.30%	496	gi 584592116	GO!
54	gi 112380623 gid 291 Allergen iso-Ara h3 [Arachis hypogae	Arachis hypogaea	46.22%	186of430	7.2e-027	33.50%	516	gi 112380623	GO!
55	gi 312233065 gid 291 Allergen Ara h 3 allergen [Arachis h	Arachis hypogaea	46.22%	170of430	2.6e-026	33.30%	516	gi 312233065	GO!
56	gi 21930 gid 154 Putative LMW glutenin [Triticum turgidum	Triticum turgidum subsp. durum	43.80%	35of430	3e-006	27.50%	171	gi 21930	GO!
57	gi 170738 gid 152 Allergen gamma-gliadin	Triticum aestivum	43.79%	33of430	0.0032	29.80%	208	gi 170738	GO!
58	gi 170730 gid 154 Putative pre-gamma-gliadin B-I	Triticum aestivum	43.71%	38of430	3e-005	40.50%	79	gi 170730	GO!
59	gi 170732 gid 154 Putative gamma-gliadin	Triticum aestivum	43.71%	38of430	3.2e-005	40.50%	79	gi 170732	GO!
60	gi 75219081 gid 154 Putative LMM glutenin 1	Triticum aestivum	42.52%	37of430	1.5e-005	26.60%	173	gi 75219081	GO!
61	gi 62550933 gid 154 Putative putative LMW-glutenin subuni	Triticum aestivum	42.52%	46of430	0.047	49.30%	69	gi 62550933	GO!
62	gi 283476402 gid 1617 Putative alpha/beta gliadin precurs	Triticum aestivum	41.29%	36of430	0.00054	25.90%	228	gi 283476402	GO!
63	gi 170736 gid 152 Allergen gamma-gliadin	Triticum aestivum	41.28%	35of430	0.015	32.30%	155	gi 170736	GO!

64	gi 508732621 gid 152 Allergen gamma-gliadin, partial [Tri	Triticum aestivum	41.28%	35of430	0.00086	31.00%	203	gi 508732621	GO!
65	gi 1137166044 gid 151 Allergen alpha-gliadin, partial [Tr	Triticum monococcum subsp. aegilopoides	40.01%	39of430	8.8e-007	29.70%	195	gi 1137166044	GO!
66	gi 897811 gid 160 Allergen HMW gluten-like protein produc	Triticum aestivum	40.01%	38of430	9.7e-006	48.40%	64	gi 897811	GO!
67	gi 208605348 gid 150 Allergen D-type LMW glutenin subunit	Triticum aestivum	40.00%	21of430	7.7e-005	27.20%	250	gi 208605348	GO!
68	gi 208605346 gid 150 Allergen D-type LMW glutenin subunit	Triticum aestivum	40.00%	21of430	6.6e-005	29.20%	209	gi 208605346	GO!
69	gi 21757 gid 151 Allergen Gliadin-like protein product [T	Triticum aestivum	39.99%	35of430	0.00019	29.80%	178	gi 21757	GO!
70	gi 21761 gid 151 Allergen Gliadin-like protein product [T	Triticum aestivum	38.79%	14of430	6.1e-005	26.80%	179	gi 21761	GO!
71	gi 21926 gid 154 Putative glutenin-like protein product [	Triticum turgidum subsp. durum	38.78%	36of430	3.9e-005	24.10%	174	gi 21926	GO!
72	gi 170708 gid 152 Allergen gamma-gliadin B precursor	Triticum aestivum	38.77%	32of430	0.029	29.50%	200	gi 170708	GO!
73	gi 170702 gid 152 Allergen gamma gliadin precursor	Triticum aestivum	38.76%	27of430	0.058	28.20%	188	gi 170702	GO!
74	gi 170724 gid 151 Allergen pre-alpha-/beta-gliadin A-IV	Triticum aestivum	38.76%	18of430	6e-006	28.30%	240	gi 170724	GO!
75	gi 73912496 gid 150 Allergen omega-5 gliadin [Triticum ae	Triticum aestivum	38.72%	27of430	1.1e-006	29.00%	217	gi 73912496	GO!
76	gi 1063270 gid 152 Allergen gamma-gliadin precursor [Trit	Triticum aestivum	38.72%	1of430	0.024	30.10%	193	gi 1063270	GO!
77	gi 208605344 gid 150 Allergen D-type LMW glutenin subunit	Triticum aestivum	37.54%	1of430	0.19	26.40%	231	gi 208605344	GO!
78	gi 508732623 gid 150 Allergen omega-gliadin, partial [Tri	Triticum aestivum	37.54%	31of430	0.16	45.50%	66	gi 508732623	GO!
79	gi 21673 gid 151 Allergen Alpha/beta gliadin-like protein	Triticum aestivum	37.52%	30of430	5e-007	28.80%	243	gi 21673	GO!
80	gi 170740 gid 151 Allergen gliadin	Triticum urartu	37.52%	30of430	0.00049	29.40%	177	gi 170740	GO!

81	gi 21783 gid 154 Putative LMW glutenin-like protein produ	Triticum aestivum	37.00%	3of430	0.00039	26.20%	240	<a href="#">gi 21783</a>	GO!
82	gi 75317968 gid 154 Putative LMM glutenin 3	Triticum aestivum	36.27%	2of430	0.00035	27.90%	208	<a href="#">gi 75317968</a>	GO!
83	gi 170726 gid 151 Allergen pre-alpha-/beta-gliadin A-III	Triticum aestivum	36.24%	10of430	0.021	27.50%	204	<a href="#">gi 170726</a>	GO!
84	gi 21765 gid 151 Allergen Gliadin-like protein product [T	Triticum aestivum	35.04%	3of430	2.1e-006	29.10%	234	<a href="#">gi 21765</a>	GO!
85	gi 170718 gid 151 Allergen alpha/beta-gliadin precursor	Triticum aestivum	35.04%	3of430	1.5e-006	29.10%	234	<a href="#">gi 170718</a>	GO!
86	gi 170712 gid 151 Allergen pre-alpha-/beta-gliadin A-II	Triticum aestivum	35.02%	15of430	2.1e-005	29.00%	183	<a href="#">gi 170712</a>	GO!

Q2TLV9: 11S globulin [Sinapis alba (White mustard)]	
<b>Database</b>	AllergenOnline Database v19 (February 10, 2019)
<b>Input Query</b>	>query MVKLAHLLVATVGVLLVLNGCLARQSLGVPPQVKDACNLNDLVDLQPTETIKSEAGRLEY WDHNNPQIRCAGVSIARLVIEQGGFYLPFFSSPKISYVVQGMGISGRVIPGCAETFMDS QPMQGGQQGHQGGQQGGQQGGQQGGQQGGQQGGQQGGQQGGQQGGQQGGQQGGQQGG GQQGFRDMYQKVEHVRHGDVIANTPGSAHWIYNTGDKPLVIISLLDIANYQNQLDRNPRV FRLAGNNPQGGFGGPQQQPQQNILNGFDPQVIAQALKIDVRLAQELQNKQDSRGNIVRV KGPVFQVVRPPLRQAYESEQWRHPRGPPQSPQDNGLLEETICSMRTHENIDDPARADIYKPN LGRVTSVNSYTIPILOQYIRLSATRGILQGSAMVLPKYNMNEANEILYCTQGQARIQVNDN GQNVLDQQVQKQLVVI PQGFAYVVQSQNNFEWISFKTNANAMISTLAGRTSALRALPLE VITNAFQISLEEARKIKFNTLETTLTRARGGQQPQLIEEIVEV
<b>Length</b>	523
<b>Number of 80 mers</b>	444
<b>Number of Sequences with hits</b>	96

Hit #	Define	Species	Best %ID	# Hits > 35%	Full Alignment			Links	
					E-val	%ID	length	NCBI	Details

1	gi 62240390 gid 837 Allergen 11S globulin precursor [Sinapis alba]	Sinapis alba	100.00%	444of444	6.6e-160	92.20%	523	<a href="#">gi 62240390</a>	GO!
2	gi 62240392 gid 837 Allergen 11S globulin precursor [Sinapis alba]	Sinapis alba	100.00%	444of444	0	100.00%	523	<a href="#">gi 62240392</a>	GO!
3	gi 288860106 gid 160 Allergen high molecular weight glutenin	Triticum aestivum	68.80%	99of444	1.3e-012	38.60%	228	<a href="#">gi 288860106</a>	GO!
4	gi 736319 gid 160 Allergen glutenin [Triticum aestivum]	Triticum aestivum	66.21%	97of444	4.7e-014	35.10%	282	<a href="#">gi 736319</a>	GO!
5	gi 158998782 gid 2066 Putative 11S legumin protein [Carya illinoensis]	Carya illinoensis	63.79%	360of444	6.3e-041	41.90%	532	<a href="#">gi 158998782</a>	GO!
6	gi 56788031 gid 817 Putative seed storage protein [Juglans regia]	Juglans regia	62.51%	367of444	1.1e-041	41.70%	545	<a href="#">gi 56788031</a>	GO!
7	gi 1126299828 gid 2597 Putative legumin [Juglans nigra]	Juglans nigra	62.51%	364of444	2.5e-041	40.80%	539	<a href="#">gi 1126299828</a>	GO!
8	gi 158998780 gid 2066 Putative 11S legumin protein [Carya illinoensis]	Carya illinoensis	62.51%	357of444	5.4e-041	41.50%	532	<a href="#">gi 158998780</a>	GO!
9	gi 25991543 gid 76 Allergen allergen Ana 0 2 [Anacardium occidentale]	Anacardium occidentale	61.30%	380of444	9.9e-070	42.70%	510	<a href="#">gi 25991543</a>	GO!
10	gi 18479082 gid 392 Allergen 11S globulin-like protein C	Corylus avellana	59.30%	399of444	4e-041	44.20%	545	<a href="#">gi 18479082</a>	GO!
11	gi 258588247 gid 1572 Putative Chain A, Crystal Structure	Prunus dulcis	59.30%	417of444	6.5e-053	45.20%	524	<a href="#">gi 258588247</a>	GO!
12	gi 557792009 gid 392 Allergen Cor a 9 allergen [Corylus avellana]	Corylus avellana	59.30%	390of444	3.4e-041	43.70%	545	<a href="#">gi 557792009</a>	GO!
13	gi 307159112 gid 1572 Putative prunin 1 precursor [Prunus dulcis]	Prunus dulcis	59.30%	436of444	2.6e-053	44.90%	543	<a href="#">gi 307159112</a>	GO!
14	gi 307159114 gid 1572 Putative prunin 2 precursor, partial	Prunus dulcis	58.00%	423of444	3.4e-062	44.00%	534	<a href="#">gi 307159114</a>	GO!
15	gi 21751 gid 160 Allergen high molecular weight glutenin	Triticum aestivum	57.52%	76of444	4.2e-009	31.30%	307	<a href="#">gi 21751</a>	GO!
16	gi 71084277 gid 160 Allergen HMW glutenin x-type subunit	Triticum aestivum	57.52%	85of444	6.8e-010	34.80%	253	<a href="#">gi 71084277</a>	GO!
17	gi 523916668 gid 1572 Putative putative Prunin 6 allergen	Prunus dulcis	57.50%	168of444	4.8e-020	46.20%	208	<a href="#">gi 523916668</a>	GO!

18	gi 22090 gid 160 Allergen HMW glutenin subunit 1By9 [Trit	Triticum aestivum	57.48%	84of444	4e-011	32.10%	287	<a href="#">gi 22090</a>	GO!
19	gi 21743 gid 160 Allergen high molecular weight glutenin	Triticum aestivum	56.80%	89of444	2.2e-011	35.20%	267	<a href="#">gi 21743</a>	GO!
20	gi 21779 gid 160 Allergen HMW glutenin-like protein produ	Triticum aestivum	56.60%	81of444	9.5e-009	28.60%	416	<a href="#">gi 21779</a>	GO!
21	gi 82469930 gid 2650 Allergen 11S globulin-like protein [	Actinidia chinensis	56.30%	344of444	4.1e-067	39.70%	514	<a href="#">gi 82469930</a>	GO!
22	gi 110349085 gid 1093 Putative Pis v 2.0201 allergen 11S	Pistacia vera	56.30%	332of444	9.2e-053	39.50%	516	<a href="#">gi 110349085</a>	GO!
23	gi 156001070 gid 1093 Putative 11S globulin [Pistacia ver	Pistacia vera	56.30%	332of444	4.9e-053	39.70%	516	<a href="#">gi 156001070</a>	GO!
24	gi 110349083 gid 1093 Putative Pis v 2.0101 allergen11S g	Pistacia vera	56.30%	335of444	1.6e-047	39.50%	522	<a href="#">gi 110349083</a>	GO!
25	gi 508732625 gid 160 Allergen high molecular weight glute	Triticum aestivum	56.24%	87of444	2.1e-011	34.20%	275	<a href="#">gi 508732625</a>	GO!
26	gi 170743 gid 160 Allergen HMW glutenin subunit Ax2* [Tri	Triticum aestivum	56.24%	87of444	2.1e-011	34.20%	275	<a href="#">gi 170743</a>	GO!
27	gi 13183173 gid 2274 Putative 11S globulin [Sesamum indic	Sesamum indicum	53.80%	345of444	2e-060	41.10%	482	<a href="#">gi 13183173</a>	GO!
28	gi 10566449 gid 574 Putative glycinin A3B4 subunit [Glyci	Glycine max	53.80%	241of444	6.4e-027	32.40%	558	<a href="#">gi 10566449</a>	GO!
29	gi 113200131 gid 531 Putative allergenic protein [Fagopyr	Fagopyrum tataricum	53.80%	226of444	2e-042	35.20%	497	<a href="#">gi 113200131</a>	GO!
30	gi 806556 gid 573 Putative A5A4B3 subunit [Glycine soja]	Glycine soja	52.50%	236of444	8.3e-027	30.20%	592	<a href="#">gi 806556</a>	GO!
31	gi 169973 gid 572 Putative glycinin A-1a-B-x subunit [Gly	Glycine max	52.50%	249of444	1.3e-031	35.70%	529	<a href="#">gi 169973</a>	GO!
32	gi 4249568 gid 573 Putative glycinin [Glycine max]	Glycine max	52.50%	236of444	6.1e-027	30.20%	592	<a href="#">gi 4249568</a>	GO!
33	gi 18615 gid 572 Putative Glycinin-like [Glycine max]	Glycine max	52.50%	250of444	1.5e-031	35.70%	529	<a href="#">gi 18615</a>	GO!
34	gi 18641 gid 573 Putative glycinin [Glycine max]	Glycine max	52.50%	220of444	6e-027	29.70%	592	<a href="#">gi 18641</a>	GO!

35	gi 18639 gid 733 Putative glycinin subunit G3 [Glycine ma	Glycine max	51.90%	252of444	3.3e-038	35.00%	525	gi 18639	GO!
36	gi 169969 gid 574 Putative glycinin	Glycine max	51.20%	224of444	1.9e-015	31.50%	558	gi 169969	GO!
37	gi 30313867 gid 347 Putative 11S globulin [Bertholletia e	Bertholletia excelsa	51.20%	308of444	8.1e-057	37.90%	522	gi 30313867	GO!
38	gi 732706 gid 573 Putative Glycinin-like protein product	Glycine max	51.20%	216of444	1.1e-026	29.80%	591	gi 732706	GO!
39	gi 218265 gid 732 Putative glycinin A2B1a subunit [Glycin	Glycine max	50.00%	206of444	7.2e-029	34.20%	515	gi 218265	GO!
40	gi 18609 gid 732 Putative Glycinin A2B1a subunit-like [Gl	Glycine max	50.00%	206of444	7.2e-029	34.20%	515	gi 18609	GO!
41	gi 29839419 gid 531 Putative 13S globulin seed storage pr	Fagopyrum esculentum	49.40%	221of444	3.1e-062	35.20%	497	gi 29839419	GO!
42	gi 29839255 gid 531 Putative 13S globulin seed storage pr	Fagopyrum esculentum	49.40%	178of444	4.1e-038	33.20%	488	gi 29839255	GO!
43	gi 29839254 gid 531 Putative 13S globulin seed storage pr	Fagopyrum esculentum	49.40%	223of444	1.3e-040	34.40%	506	gi 29839254	GO!
44	gi 3703107 gid 291 Allergen glycinin [Arachis hypogaea]	Arachis hypogaea	48.78%	152of444	2.8e-025	32.00%	525	gi 3703107	GO!
45	gi 5381325 gid 2273 Allergen 11S globulin precursor [Sesa	Sesamum indicum	48.10%	218of444	6.9e-052	33.30%	514	gi 5381325	GO!
46	gi 21314465 gid 291 Allergen allergen Arah3/Arah4 [Arachi	Arachis hypogaea	47.50%	208of444	1.2e-020	32.40%	561	gi 21314465	GO!
47	gi 170738 gid 152 Allergen gamma-gliadin	Triticum aestivum	47.50%	52of444	0.00068	30.90%	207	gi 170738	GO!
48	gi 5712199 gid 291 Allergen glycinin [Arachis hypogaea]	Arachis hypogaea	47.50%	135of444	8.7e-023	30.70%	550	gi 5712199	GO!
49	gi 22135348 gid 291 Allergen trypsin inhibitor [Arachis h	Arachis hypogaea	47.50%	72of444	1.3e-014	33.30%	252	gi 22135348	GO!
50	gi 199732457 gid 291 Allergen arachin Arah3 isoform [Arac	Arachis hypogaea	47.50%	180of444	4.4e-026	31.90%	551	gi 199732457	GO!
51	gi 224036293 gid 291 Allergen Chain A, Crystal Structure	Arachis hypogaea	47.50%	180of444	4.2e-026	32.20%	525	gi 224036293	GO!



52	gi 312233065 gid 291 Allergen Ara h 3 allergen [Arachis h	Arachis hypogaea	46.30%	176of444	7.8e-038	31.90%	529	gi 312233065	GO!
53	gi 73912496 gid 150 Allergen omega-5 gliadin [Triticum ae	Triticum aestivum	46.30%	54of444	0.00052	28.60%	259	gi 73912496	GO!
54	gi 112380623 gid 291 Allergen iso-Ara h3 [Arachis hypogae	Arachis hypogaea	46.30%	180of444	2.2e-038	32.10%	529	gi 112380623	GO!
55	gi 283476402 gid 1617 Putative alpha/beta gliadin precurs	Triticum aestivum	46.27%	38of444	1.2e-006	44.90%	78	gi 283476402	GO!
56	gi 62550933 gid 154 Putative putative LMW-glutenin subuni	Triticum aestivum	46.24%	53of444	5.9e-006	57.80%	64	gi 62550933	GO!
57	gi 170736 gid 152 Allergen gamma-gliadin	Triticum aestivum	45.20%	48of444	0.00016	49.30%	69	gi 170736	GO!
58	gi 508732621 gid 152 Allergen gamma-gliadin, partial [Tri	Triticum aestivum	45.20%	46of444	6e-005	29.90%	204	gi 508732621	GO!
59	gi 170708 gid 152 Allergen gamma-gliadin B precursor	Triticum aestivum	45.20%	44of444	0.0005	30.20%	212	gi 170708	GO!
60	gi 169971 gid 574 Putative glycinin precursor	Glycine max	45.05%	110of444	1.9e-026	37.70%	191	gi 169971	GO!
61	gi 208605346 gid 150 Allergen D-type LMW glutenin subunit	Triticum aestivum	45.00%	57of444	0.00033	30.30%	211	gi 208605346	GO!
62	gi 208605348 gid 150 Allergen D-type LMW glutenin subunit	Triticum aestivum	45.00%	53of444	9.3e-005	28.70%	254	gi 208605348	GO!
63	gi 170732 gid 154 Putative gamma-gliadin	Triticum aestivum	45.00%	53of444	1e-006	45.00%	80	gi 170732	GO!
64	gi 170730 gid 154 Putative pre-gamma-gliadin B-I	Triticum aestivum	45.00%	53of444	9.5e-007	45.00%	80	gi 170730	GO!
65	gi 1063270 gid 152 Allergen gamma-gliadin precursor [Trit	Triticum aestivum	44.99%	41of444	4.4e-005	30.30%	198	gi 1063270	GO!
66	gi 21930 gid 154 Putative LMW glutenin [Triticum turgidum	Triticum turgidum subsp. durum	44.97%	56of444	4.6e-007	30.60%	173	gi 21930	GO!
67	gi 508732623 gid 150 Allergen omega-gliadin, partial [Tri	Triticum aestivum	44.95%	40of444	6.2e-005	27.10%	251	gi 508732623	GO!
68	gi 170702 gid 152 Allergen gamma gliadin precursor	Triticum aestivum	44.80%	36of444	0.0012	39.10%	110	gi 170702	GO!
69	gi 584592120 gid 2481 Putative 13S globulin [Fagopyrum es	Fagopyrum esculentum	43.80%	167of444	3.1e-026	31.70%	508	gi 584592120	GO!

70	gi 584592116 gid 2481 Putative 13S globulin [Fagopyrum es	Fagopyrum esculentum	43.80%	172of444	3.1e-026	31.90%	508	gi 584592116	GO!
71	gi 170710 gid 151 Allergen alpha-type gliadin precursor p	Triticum aestivum	41.25%	38of444	6.1e-005	28.70%	244	gi 170710	GO!
72	gi 208605344 gid 150 Allergen D-type LMW glutenin subunit	Triticum aestivum	41.24%	28of444	6.7e-006	27.70%	242	gi 208605344	GO!
73	gi 335331566 gid 154 Putative low molecular weight gluten	Triticum aestivum	41.24%	27of444	0.0045	22.30%	301	gi 335331566	GO!
74	gi 75219081 gid 154 Putative LMM glutenin 1	Triticum aestivum	41.23%	54of444	1e-006	30.10%	173	gi 75219081	GO!
75	gi 1137166044 gid 151 Allergen alpha-gliadin, partial [Tr	Triticum monococcum subsp. aegilopoides	40.04%	30of444	0.00012	31.00%	174	gi 1137166044	GO!
76	gi 21926 gid 154 Putative glutenin-like protein product [	Triticum turgidum subsp. durum	40.03%	46of444	6.1e-006	46.40%	69	gi 21926	GO!
77	gi 21773 gid 154 Putative LMW glutenin-like protein produ	Triticum aestivum	40.03%	35of444	0.0014	52.50%	61	gi 21773	GO!
78	gi 508732627 gid 154 Putative low molecular weight gluten	Triticum aestivum	40.03%	35of444	0.0012	52.50%	61	gi 508732627	GO!
79	gi 170734 gid 154 Putative gamma gliadin B-III	Triticum aestivum	40.03%	35of444	0.001	52.50%	61	gi 170734	GO!
80	gi 21783 gid 154 Putative LMW glutenin-like protein produ	Triticum aestivum	40.02%	45of444	7e-005	55.20%	58	gi 21783	GO!
81	gi 897811 gid 160 Allergen HMW gluten-like protein produc	Triticum aestivum	40.00%	58of444	1.1e-006	50.00%	64	gi 897811	GO!
82	gi 21757 gid 151 Allergen Gliadin-like protein product [T	Triticum aestivum	39.99%	10of444	0.00051	30.40%	171	gi 21757	GO!
83	gi 75317968 gid 154 Putative LMM glutenin 3	Triticum aestivum	39.97%	48of444	1.1e-005	57.10%	56	gi 75317968	GO!
84	gi 170718 gid 151 Allergen alpha/beta-gliadin precursor	Triticum aestivum	39.97%	32of444	8.2e-005	43.20%	74	gi 170718	GO!
85	gi 21765 gid 151 Allergen Gliadin-like protein product [T	Triticum aestivum	39.97%	32of444	8.2e-005	43.20%	74	gi 21765	GO!
86	gi 21673 gid 151 Allergen Alpha/beta gliadin-like protein	Triticum aestivum	38.76%	23of444	0.00024	28.20%	206	gi 21673	GO!
87	gi 170712 gid 151 Allergen pre-alpha-/beta-gliadin A-II	Triticum aestivum	38.10%	8of444	0.0039	24.40%	234	gi 170712	GO!

88	gi 170726 gid 151 Allergen pre-alpha-/beta-gliadin A-III	Triticum aestivum	38.10%	13of444	0.029	26.80%	213	<a href="#">gi 170726</a>	GO!
89	gi 21761 gid 151 Allergen Gliadin-like protein product [T	Triticum aestivum	37.54%	38of444	0.00092	31.40%	169	<a href="#">gi 21761</a>	GO!
90	gi 170722 gid 151 Allergen pre-alpha-/beta-gliadin A-I	Triticum aestivum	37.54%	24of444	0.00082	29.90%	167	<a href="#">gi 170722</a>	GO!
91	gi 886967 gid 154 Putative low molecular weight glutenin	Triticum aestivum	37.53%	10of444	0.021	27.00%	189	<a href="#">gi 886967</a>	GO!
92	gi 886965 gid 154 Putative low molecular weight glutenin	Triticum aestivum	37.52%	16of444	0.042	28.10%	178	<a href="#">gi 886965</a>	GO!
93	gi 21755 gid 151 Allergen Alpha/beta gliadin-like protein	Triticum aestivum	37.50%	10of444	0.00022	24.40%	225	<a href="#">gi 21755</a>	GO!
94	gi 170720 gid 151 Allergen alpha/beta-gliadin precursor [	Triticum aestivum	37.50%	10of444	0.00049	26.30%	224	<a href="#">gi 170720</a>	GO!
95	gi 886963 gid 154 Putative low molecular weight glutenin	Triticum aestivum	36.25%	27of444	0.019	28.70%	150	<a href="#">gi 886963</a>	GO!
96	gi 62484809 gid 152 Allergen putative gamma-gliadin [Trit	Triticum aestivum	35.02%	1of444	6.3	40.00%	70	<a href="#">gi 62484809</a>	GO!

### C3S7F1: Oleosin S2-2 [Brassica napus (Rape)]

<b>Database</b>	AllergenOnline Database v19 (February 10, 2019)
<b>Input Query</b>	>query MATVERRVQVDPTDKRIHLQPQYEGDVGYGYGGRADYKSSGPPSSNQIVALIVGVVPGG SLLALAGLTLGASVIGLMLSVPLFLLFSPVIVPAAITIGLAVTAILASGLFGLTGLSSVS WVLNLYLRGTS DTVPEQLDYAKRRMADAVGYAGQKKGEMGQYVQDKAHEAHDTS LTTETTE PGKTRRHT
<b>Length</b>	188
<b>Number of 80 mers</b>	109
<b>Number of Sequences with hits</b>	10

	<b>Defline</b>	<b>Species</b>			<b>Full Alignment</b>	<b>Links</b>
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Hit #			Best %ID	# Hits > 35%	E-val	%ID	length	NCBI	Details
1	gi 49617323 gid 2298 Allergen oleosin [Corylus avellana]	Corylus avellana	70.01%	109of109	2.2e-042	52.50%	158	<a href="#">gi 49617323</a>	<a href="#">GO!</a>
2	gi 113200509 gid 2283 Putative oleosin 1 [Arachis hypogae	Arachis hypogaea	64.98%	104of109	6.5e-039	46.20%	171	<a href="#">gi 113200509</a>	<a href="#">GO!</a>
3	gi 52001239 gid 2283 Putative oleosin 2, partial [Arachis	Arachis hypogaea	64.98%	106of109	2.6e-038	52.30%	149	<a href="#">gi 52001239</a>	<a href="#">GO!</a>
4	gi 10834827 gid 1893 Putative oleosin [Sesamum indicum]	Sesamum indicum	62.50%	103of109	2.2e-031	45.90%	157	<a href="#">gi 10834827</a>	<a href="#">GO!</a>
5	gi 71040655 gid 2284 Putative oleosin 1 [Arachis hypogaea	Arachis hypogaea	55.00%	74of109	1e-021	43.80%	128	<a href="#">gi 71040655</a>	<a href="#">GO!</a>
6	gi 122218540 gid 2284 Putative Oleosin 2	Arachis hypogaea	53.80%	71of109	4e-021	39.90%	138	<a href="#">gi 122218540</a>	<a href="#">GO!</a>
7	gi 198250343 gid 1238 Putative main allergen 15 kDa oleos	Sesamum indicum	53.80%	78of109	1.1e-021	40.90%	132	<a href="#">gi 198250343</a>	<a href="#">GO!</a>
8	gi 5381321 gid 1238 Putative 15 kDa oleosin [Sesamum indi	Sesamum indicum	53.80%	78of109	1.6e-021	40.90%	132	<a href="#">gi 5381321</a>	<a href="#">GO!</a>
9	gi 29170509 gid 389 Putative oleosin [Corylus avellana]	Corylus avellana	50.00%	68of109	1.1e-021	41.00%	117	<a href="#">gi 29170509</a>	<a href="#">GO!</a>
10	gi 52001241 gid 2285 Allergen oleosin 3 [Arachis hypogaea	Arachis hypogaea	45.10%	77of109	9.1e-021	38.20%	144	<a href="#">gi 52001241</a>	<a href="#">GO!</a>

### C3S7F8: Oleosin S3-1 [Brassica napus (Rape)]

<b>Database</b>	AllergenOnline Database v19 (February 10, 2019)
<b>Input Query</b>	>query MADTARTHHDITSRDQYPILGRDRDQYPYGRSDYQTSQGQDYSKTRQIAKAATAVAVTAGGSL LVLSSLTLVGTVIALTVATLLVIFSPILVPALITVALLITGFLSSGGFGIADITVFSWI YKYATGEHPQGSCLKLSARMKLGTKAQDIKDRAYYQQHTGGEHDDRDRTRGTHHTTTTT
<b>Length</b>	180
<b>Number of 80 mers</b>	101
<b>Number of Sequences with hits</b>	10

Hit #	Defline	Species	Best %ID	# Hits > 35%	Full Alignment			Links	
					E-val	%ID	length	NCBI	Details
1	gi 5381321 gid 1238 Putative 15 kDa oleosin [Sesamum indi	Sesamum indicum	76.20%	101of101	6e-031	63.20%	125	<a href="#">gi 5381321</a>	<a href="#">GO!</a>
2	gi 198250343 gid 1238 Putative main allergen 15 kDa oleos	Sesamum indicum	76.20%	101of101	6e-031	63.20%	125	<a href="#">gi 198250343</a>	<a href="#">GO!</a>
3	gi 29170509 gid 389 Putative oleosin [Corylus avellana]	Corylus avellana	73.80%	98of101	1.1e-032	66.90%	121	<a href="#">gi 29170509</a>	<a href="#">GO!</a>
4	gi 71040655 gid 2284 Putative oleosin 1 [Arachis hypogaea	Arachis hypogaea	70.00%	94of101	1.2e-028	60.80%	125	<a href="#">gi 71040655</a>	<a href="#">GO!</a>

5	gi 122218540 gid 2284 Putative Oleosin 2	Arachis hypogaea	68.80%	94of101	4.6e-029	61.60%	125	<a href="#">gi 122218540</a>	<a href="#">GO!</a>
6	gi 52001241 gid 2285 Allergen oleosin 3 [Arachis hypogaea	Arachis hypogaea	65.00%	97of101	5.3e-024	48.70%	156	<a href="#">gi 52001241</a>	<a href="#">GO!</a>
7	gi 10834827 gid 1893 Putative oleosin [Sesamum indicum]	Sesamum indicum	48.10%	79of101	6.1e-015	36.30%	171	<a href="#">gi 10834827</a>	<a href="#">GO!</a>
8	gi 49617323 gid 2298 Allergen oleosin [Corylus avellana]	Corylus avellana	45.70%	55of101	1.2e-013	31.50%	149	<a href="#">gi 49617323</a>	<a href="#">GO!</a>
9	gi 113200509 gid 2283 Putative oleosin 1 [Arachis hypogae	Arachis hypogaea	41.29%	54of101	1.3e-015	32.40%	148	<a href="#">gi 113200509</a>	<a href="#">GO!</a>
10	gi 52001239 gid 2283 Putative oleosin 2, partial [Arachis	Arachis hypogaea	41.29%	55of101	1.9e-014	33.30%	129	<a href="#">gi 52001239</a>	<a href="#">GO!</a>

### Q6W7E8: Enolase [Brassica campestris (Field mustard)]

<b>Database</b>	AllergenOnline Database v19 (February 10, 2019)
<b>Input Query</b>	>query MATITAVKARQIFDSRGNPTVEVDVHTSSGVKVTAAVPSGASTGIYEALRLDGGSDYLG KGVSKAVGNVNSIIGPASIGKDPTQQTAINDFMVHELDGTQNEWGWCKQKLGANAILAVS LAVCKAGAVVSGIPLYKHIANLAGNPKIVLPVPAFNVINGGSHAGNKLAMQEFMILPVGA SSFKEAMKMGVEVYHNLKSVIKKKYGQDATNVGDEGGFAPNIQENKEGLELLKTAIEKAG YTGKVVIGMDVAASEFYSSDKTYDLNFKEENNNGSQKISGDALKDLYKSFVAEYPIVSI DPFDQDDWEHYAKMTAECGDNVQIVGDDLLVTNPKGVAKAIAEKSCNALLLKVNIQISVT ESIEAVKMSKRAGWGMASHRSGETEDTFIADLSVGLSTGQIKTGAPCRSERLAKYNQLL RIEEELGSEAVYAGANFRKPVEPY
<b>Length</b>	444
<b>Number of 80 mers</b>	365
<b>Number of Sequences with hits</b>	16

Hit #	Define	Species	Best %ID	# Hits > 35%	Full Alignment			Links	
					E-val	%ID	length	NCBI	Details
1	gi 14423687 gid 586 Putative Enolase 2 (2-phosphoglycerat	Hevea brasiliensis	98.80%	365of365	1.1e-170	89.60%	442	<a href="#">gi 14423687</a>	<a href="#">GO!</a>
2	gi 9581744 gid 586 Putative enolase, isoform 1 [Hevea bra	Hevea brasiliensis	98.80%	365of365	1.6e-171	90.00%	442	<a href="#">gi 9581744</a>	<a href="#">GO!</a>

3	gi 576011129 gid 1955 Allergen RecName: Full=Alpha-enolas	Thunnus albacares	88.70%	365of365	2.9e-129	69.50%	442	<a href="#">gi 576011129</a>	<a href="#">GO!</a>
4	gi 385145180 gid 1959 Allergen enolase [Salmo salar]	Salmo salar	88.70%	365of365	5.1e-130	69.90%	442	<a href="#">gi 385145180</a>	<a href="#">GO!</a>
5	gi 197632415 gid 1959 Allergen enolase 3-2 [Salmo salar]	Salmo salar	85.02%	365of365	7.2e-125	68.00%	441	<a href="#">gi 197632415</a>	<a href="#">GO!</a>
6	gi 46048765 gid 2710 Allergen beta-enolase [Gallus gallus]	Gallus gallus	83.80%	365of365	3.6e-119	65.10%	441	<a href="#">gi 46048765</a>	<a href="#">GO!</a>
7	gi 232054 gid 396 Allergen Enolase 1 (2-phosphoglycerate	Candida albicans	82.50%	365of365	1.5e-111	63.10%	444	<a href="#">gi 232054</a>	<a href="#">GO!</a>
8	gi 30314940 gid 103 Putative enolase [Rhodotorula mucilag	Rhodotorula mucilaginosa	80.00%	365of365	9.5e-107	61.00%	441	<a href="#">gi 30314940</a>	<a href="#">GO!</a>
9	gi 6015094 gid 491 Putative Enolase (2-phosphoglycerate d	Davidiella tassiana	77.50%	365of365	1.6e-108	60.70%	443	<a href="#">gi 6015094</a>	<a href="#">GO!</a>
10	gi 83288046 gid 329 Putative Enolase (2-phosphoglycerate	Aspergillus fumigatus	77.50%	365of365	7.6e-108	61.60%	443	<a href="#">gi 83288046</a>	<a href="#">GO!</a>
11	gi 467660 gid 491 Putative enolase; phosphopyruvate hydra	Davidiella tassiana	77.50%	365of365	1.8e-106	59.80%	443	<a href="#">gi 467660</a>	<a href="#">GO!</a>
12	gi 13925873 gid 329 Putative enolase [Aspergillus fumigat	Aspergillus fumigatus	77.50%	365of365	1.2e-107	61.40%	443	<a href="#">gi 13925873</a>	<a href="#">GO!</a>
13	gi 14423684 gid 66 Putative Enolase (2-phosphoglycerate d	Alternaria alternata	76.20%	365of365	2.4e-106	60.60%	444	<a href="#">gi 14423684</a>	<a href="#">GO!</a>
14	gi 13991101 gid 249 Putative enolase [Penicillium citrinu	Penicillium citrinum	76.20%	365of365	6.7e-105	60.50%	443	<a href="#">gi 13991101</a>	<a href="#">GO!</a>
15	gi 14585753 gid 1031 Putative enolase [Curvularia lunata]	Cochliobolus lunatus	75.00%	365of365	4.2e-098	56.50%	448	<a href="#">gi 14585753</a>	<a href="#">GO!</a>
16	gi 344049993 gid 2295 Putative enolase, partial [Fennerop	Fenneropenaeus merguensis	68.80%	114of365	3.7e-031	66.70%	117	<a href="#">gi 344049993</a>	<a href="#">GO!</a>

### Q42618- BRANA Beta-glucosidase [Brassica napus (Rape)]

**Database**

AllergenOnline Database v19 (February 10, 2019)

<b>Input Query</b>	>query MKFPLLGLLLLVLVGSPTRAEEGPVCPKTETLSRASFPPEGFMFGTATASYQVEGAVNEG CRGPSLWDIYTKKFPHRVKNHNADVAVDFYHRFREDIKLMKKLNTDALRLSIAWPRI FPH GRMEKGNKSEGVQFYHDLIDEELLKNDLTPLVTFHWDMPADLEDEYGGFLSERVVPDFVE YANFTFHEYGDKVKNWITFNEPWVFSRSAYDVGKKAPGRCSPIKDFGHLCQDGRSGFEA YVVSHNLLVSHAEAVDAFRKCEKCKGDKIGIAHSPAWFEPEDVEGGQRTVDRVLDIFMGW HLDPTTYGDYPQSMKDAVGARLPKFTKAQKAKLKSADFGVGINYSSFYAKASEKPDYRQ PSWATDSLVEFEPKTVDGSVKIGSQPSTAKMAVYAAGLRKLVKYIKDRYGNPEIIITENG YGEDLGEKTDHVALNDHNRKYYHQRHLLSLHQAICEDKVNVTSYFVWVSLMDNFEWLDG YTARFGLYYIDFQNNLTRMEKESATCSLNSNRA
<b>Length</b>	514
<b>Number of 80 mers</b>	435
<b>Number of Sequences with hits</b>	0

No Matches of Greater than 35% Identity Found

<b>O23733-RAJU Cysteine synthase [Brassica juncea]</b>	
<b>Database</b>	AllergenOnline Database v19 (February 10, 2019)
<b>Input Query</b>	>query MASRIAKDVTELIGNTPLVYLNNVAEGCVGRVAAKLEMMEPCSSVKDRIGFSMISDAEQK GLIKPGESVLIPTSGNTGVGLAFTAAAKGYKLIITMPASMSVERRIILLAFGVELVLT PAKGMKGAIKAAEELAKTPNGYMLQQFENPANPKIHYETTGPFIWKGTGDKIDGFVSGI GTGGTITGAGKYLKEQNPVVKLYGVEPIESAILSGGKPGPHKIQQIGAGFIPSVLEVDLI DEVVQVSSDESIDMARLLALKEGLLVGISSGAAAAAAIKLAKRPNAGKLFVAVFPSFGE RYLSTVLFDATRKEAESMTFQA
<b>Length</b>	322
<b>Number of 80 mers</b>	243

<b>Number of Sequences with hits</b>		1								
<b>Hit #</b>	<b>Defline</b>	<b>Species</b>	<b>Best %ID</b>	<b># Hits &gt; 35%</b>	<b>Full Alignment</b>			<b>Links</b>		
					<b>E-val</b>	<b>%ID</b>	<b>length</b>	<b>NCBI</b>	<b>Details</b>	
1	gi 729764 gid 519 Putative Heat shock 70 kDa protein (All	Davidiella tassiana	35.40%	13of243	1.2	30.70%	140	<a href="#">gi 729764</a>	<a href="#">GO!</a>	

<b>C3S7H5-BRANA Caleosin CLO1-2 [Brassica napus (Rape)]</b>	
<b>Database</b>	AllergenOnline Database v19 (February 10, 2019)
<b>Input Query</b>	>query MSTATEIMGRDAMATVAPYAPVTFHRRARVDMDDRLPKPYMPRALQAPDREHPYGTPGHK NYGLSVLQQHVAFDLYDNGI IYPWETYSGLRMLGFNIIVSLIAAAVINLALSyatLTGW FPSPFFPIYIHNIHKS KHGSDSRTYDNEGRFMPVNLELIFSKYAKTLPDKLSLGELWEMT QQQRDAWDIFGWFASKIEWGLLYLLARDEEGFLSKEAIRRCFDGSLFEYCAKIYAGINED KTAYY
<b>Length</b>	245
<b>Number of 80 mers</b>	166
<b>Number of Sequences with hits</b>	0

No Matches of Greater than 35% Identity Found

<b>P13244- Malate synthase. glyoxysomal [Brassica napus (Rape)]</b>	
<b>Database</b>	AllergenOnline Database v19 (February 10, 2019)



<b>Input Query</b>	>query MELETSVYRPNVAVYDSDPDGVEVRGRYDQVFAKILTRDALGFVAELQREFRGHVRYAMEC RREVKRRYNSGAVPGFDPSTKFI RDGEWVCASVPPAVADRRVEITGPVERKMI INALNSG AKVFMADFEDALSPSWENLMRGQVNLKDAVDGSITFNDKARNKVYKLNQVAKLFVRPRG WHLPEAHILIDGEPATGCLVDFGLYFFHNYAKFRQTQGSFGPFFYLPKMEHSREAKIWN SVFERAEKMAGIERGSIRATVLIETLPAVFMNEILYELRDHSVGLNCGRWDYIFSIVKT FQAHPRLLPDRVLVGMGQHFMRSYSDLLIRTCHKRGVHAMGGMAAQIPIRDDPKANEMA LDLVKKDKLREVRAGHDGTWAAHPGLIPICMDAFSHMGNNPNQIKSMKRDDASAITTEEDL LQIPRGVRTLEGLRLNTRVGIQYLAAWLTGSGSVPLYNLMEDAATAEISRVQNWQWIRYG VELDGDGLGVRVSKELFGRVVEEEMERIEKEVKGDKFKRGMYPEACKMFTKQCTAAELDD FLTLAVYDHIVAHYPINASRL
<b>Length</b>	561
<b>Number of 80 mers</b>	482
<b>Number of Sequences with hits</b>	0

No Matches of Greater than 35% Identity Found

<b>Q7XZT2-BRAJU Glutathione S-transferase 3 [Brassica juncea ]</b>	
<b>Database</b>	AllergenOnline Database v19 (February 10, 2019)
<b>Input Query</b>	>query MAGIKVFGSAASPSTRVLLALHEKNLDFELVNVELKDGEHKKPEPFLSRNPFVKVPAFED GDLKLFESRAITQYIAHRYEGQTNLLPADSKNIAHYA IMAIGLEVEAHQFDPVASKLAW EQVFKNFYGLTTDQAVVAEEEEAKLAKVLDVYEARLKEFKYLAGEFTFTLTDLHHIPVIQYL LGTPTKKLFTERPRVNEWVAEITKRPASQKILQ

<b>Length</b>	213
<b>Number of 80 mers</b>	134
<b>Number of Sequences with hits</b>	4

Hit #	Define	Species	Best %ID	# Hits > 35%	Full Alignment			Links	
					E-val	%ID	length	NCBI	Details
1	gi 359326557 gid 856 Allergen glutathione S transferase c	Periplaneta americana	40.00%	14of134	1.2e-006	29.40%	163	<a href="#">gi 359326557</a>	<a href="#">GO!</a>
2	gi 1337340498 gid 856 Allergen glutathione S transferase	Periplaneta americana	40.00%	14of134	1.2e-006	29.20%	161	<a href="#">gi 1337340498</a>	<a href="#">GO!</a>
3	gi 161137518 gid 1353 Putative delta class glutathione S-	Blattella germanica	38.80%	15of134	4.9e-006	29.40%	197	<a href="#">gi 161137518</a>	<a href="#">GO!</a>
4	gi 60678789 gid 856 Allergen Per a 5 allergen [Periplanet	Periplaneta americana	38.80%	13of134	1.5e-005	28.80%	163	<a href="#">gi 60678789</a>	<a href="#">GO!</a>