

siRNA Database

Protein Lounge has created the first comprehensive siRNA database that contains siRNA targets against all known mRNA sequences throughout a variety of organisms. The database has also been subdivided into folders for siRNA against Kinases, Phosphatases, Transcription Factors and Disease genes in order to provide a total solution for your RNAi research needs. All siRNA targets in the database are linked to Protein Lounge's web-based siRNA cloning tool that allows users to chose from a wide variety of vectors and also search for specific repeat patterns in genomes. The siRNA Database will save you a great deal of time in researching, since targets against all known genes have been pregenerated in this database, simply search for your genes and get the siRNA targets. All genes in the siRNA database are also linked to our Protein and Pathway databases, giving you detailed information about the genes which the siRNA target. This is a necessary database for anyone working with gene expression analysis and high-throughput screening.

Gene Name	GenBank	siRNA Best Target	Position	More siRNA	Clone
1-acylglycerol-3-phosphate O-acyltransferase 2	NM_006412	cctcaaaagtgtggatctatcc	View		Clone
1-acylglycerol-3-phosphate O-acyltransferase 3	NM_020132	ccacaacttcgagatcgactt	View	View	Clone
101F6	NM_007022	gtccaagctataaccatgctac	View		Clone
1110047K16Rik	NM_005595	agtgcggaagatattccg	View	View	Clone
13CDNA73	NM_023037	gccattgacgaaatctctgca	View	View	Clone
1D12A	NM_021981	actctagaaagtgcraacc	View		Clone
2-5-oligoadenylate synthetase 2 6971kDa (OAS2)	NM_002535	gaatgtcagacactgatcgac	View	View	Clone
2-5-oligoadenylate synthetase-like OASL	NM_198213	acatcggccaactaaagtcaa	View		Clone
20D7-FC4	NM_012066	cagcatctcattttttctctc	View		
24432	NM_022914	tgtgtgcatctctgagaatg	View		
25-oligoadenylate synthetase 1 4046kDa (OAS1)	NM_002534	ccatgccattgacatcatctg	View	View	
2HOR0202	NM_005870	tgcagattccacttgatggtg	View	View	
3 exonribonuclease	NM_153332	ggatccaagtctcattacctcc	View	View	

Browsing the siRNA Database:

You can search by gene names or GenBank IDs to find the matching siRNA in all organisms or just for specific organisms. The siRNA database also has specific interest folders for those interested specifically in siRNA against transcription factors, kinases or phosphatase, and disease causing genes. The initial page of the siRNA search displays the matching genes and the primary siRNA target for those genes, additionally there is a 'More siRNA Targets' link which displays all of the possible targets, as shown below.

Showing Other siRNA Targets From siRNA Database:-
Gene Name Selected: 3PAP
GenBank Number: NM_019061 | Organism: Homo sapiens
Sequence Size: 2244 bp cDNA (Coding Region)

siRNA Best Targets

Target	Position	Clone
1. gccagcacagctactgaagtat	(163-183)	Clone
2. tttaacaagaccatccacaggc	(899-919)	Clone
3. agtagcagctggcttgacata	(1075-1095)	Clone
4. agcaagcctttgaaatctgctc	(1537-1557)	Clone
5. atgatggaggaggtccagagt	(1999-2019)	Clone All

Sequence:

```

1 atgctgggga aaggagtagt cggcgggtggc ggcggcacc aaggccccca gccctcttc
61 gtgtcgtacg tacgcccgtga ggaattcac acaaacgaaa aggaagtac agagaaggaa
121 gtaactcttc actgtgtgcc aggtgaacag ctgcttcttg aagccagcac agtactgaag
181 tatgtccagg aagattctctg tcagcatggg gtctatggga ggctgtctg cacagacttc
241 aagatgacct tctgggtgga tgatgaatcg gcatggata atgatgaac tcaatttaag
301 aataaaggtta taggagaaaa tgacattaca ctccactgtg ttgatcagat ttagggatg
361 ttgatgaga aaaaagaaac tctctttgga caactgaaga aataccctga gaagtcate
421 atccactgca aagacccttg agtgttccag tttgtctgca ggtacacaaa ggaagaggaa
481 gtcaaaaagg tttgtcagtg cataattcat cataccagg ctctaaact gcttaaacg
541 ttattctctg tttctatgc gactgtgcca caaaacaata cagtcactga tcccaagac
601 cataaccgtaa tgtttgacac acttaaggac tgggtgttgg aactggaac gaccaaaagg
661 aactgaagt acaaacgagt gagtgtcaac gaaggtata aagctgtga gagattgcca
721 gcatacttgg ttgtcccacc cctctctctc caaatccaaa agagccttct tcaggtctat
781 ggcataccaa tatggtgttg gctctgccac aatggaagt ccctttgaa aatgtagca
841 ctgccaaaag aacaggtatg cggcatttta caacttaaat ttaaacagct agatggaatt
901 tacaagacca tccacaggcc accctatgaa atgttataa cgggaagact gtcacagca
961 ttctgtctcc tgcaggaat ccagactgca tacttaaat ttaaacagct agatggaatt
1021 gataacagta ctgaattttg ggcacagat ataaaatggt tttctgtgt ggaagtagc
1081 agctggcttg acataatcag acgttgcttg aaaaaagca tagagattac agaattgatg
1141 gaagcacaac acatgaatgt tttcttttta gaggagaatg catccagact ctgctctctc
1201 attctctctc tggtycaact gatgatggac ccccactgca gaaccagaat tggttccag

```

Viewing siRNA Targets:

When one clicks on the view 'More siRNA Targets' link, a pop-up appears, which contains all of the possible targets. The primary target, which is listed first is based on closeness to the start of the mRNA sequence. The mRNA sequence is also display with the siRNA target regions highlighted along the sequence, allowing one to view the regions which will be cleaved. There is a 'Clone' button which allows you to place the siRNA of interest into Protein Lounge's online siRNA cloning program, as seen in the diagram below.

Showing The siRNA Base Target For The Selected Gene From siRNA Database:

GeneName: 3PAP
GenBank No: NM_019061

1. 163-183 899-919 1075-1095 1537-1557 1999-2019

Supplier Details Vectors Details Add/Edit Your Vector Select Your Vector

Please Choose Below For siRNA Cloning:

Select a Supplier: Select a Vector:

Custom: Yes No (If "Yes" option is selected then the above selection will be discarded.)

Supplier: Vector:

Loop Sequence: Terminate Sequence:

Please Choose Below For Synthetic siRNA:

Loop Sequence: Terminate Sequence:

Cloning siRNA:

Once you selected the a siRNA, you can use the Protein Lounge siRNA cloning program to determine the necessary sequence for cloning. The cloning program has a list of many vectors from a variety of companies to chose from. This program allows for siRNA vector cloning as well as synthetic siRNA production.