

Additional File 1, Table S1

Num.	Attribute	Description	Domain
1	MSA_N	Number of Orthologus Sequences in the alignment	numeric
2	hasFeature_PFam	Indicating if the current nsSNP is within an annotated Pfam domain	{true,false}
3	hasFeature_SSF	Indicating if the current nsSNP is within an annotated SuperFamily domain	{true,false}
4	hasFeature_PS	Indicating if the current nsSNP within an annotated Prosite domain	{false,true}
5	Pure_Entropy_0	Entropy for the current nsSNP-containing column in the alignment	numeric
6	Pure_Mutant_Entropy_0	Entropy for the current nsSNP-containing column in the alignment after mutation	numeric
7	Pure_Entropy_delta0	Value Difference between the 6th attribute and 5th attribute	numeric
8	Pure_Blosum_score_0	BLOSUM62 score for the current nsSNP-containing column in the alignment	numeric
9	Pure_Mutant_Blosum_score_0	BLOSUM62 score for the current nsSNP-containing column in the alignment aftermutation	numeric
10	Pure_Blosum_score_delta0	Value Difference between the 9th attribute and 8th attribute	numeric
11	SeqWeighted_Entropy_0	Entropy for the current nsSNP-containing column in the alignment using the sequence similarity weighting scheme	numeric
12	SeqWeighted_Mutant_Entropy_0	Entropy for the current nsSNP-containing column in the alignment using the sequence similarity weighting scheme after mutation	numeric
13	SeqWeighted_Entropy_delta0	Value Difference between the 13th attribute and 12th attribute	numeric
14	SeqWeighted_Blosum_score_0	BLOSUM62 score for the current nsSNP-containing column in the alignment using the sequence similarity weighting scheme	numeric
15	SeqWeighted_Mutant_Blosum_score_0	BLOSUM62 score for the current nsSNP-containing column in the alignment aftermutation using the sequence similarity weighting scheme	numeric
16	SeqWeighted_Blosum_score_del	Value Difference between the	numeric

	ta0	15 attribute and 14th attribute	
17	TreeWeighted_Entropy_0	Entropy for the current nsSNP-containing column in the alignment using the phylogenetic tree weighting scheme	numeric
18	TreeWeighted_Mutant_Entropy_0	Entropy for the current nsSNP-containing column in the alignment using the phylogenetic tree weighting scheme after mutation	numeric
19	TreeWeighted_Entropy_delta0	Value Difference between the 18th attribute and 17th attribute	numeric
20	TreeWeighted_Blosum_score_0	BLOSUM62 score for the current nsSNP-containing column in the alignment using the phylogenetic tree weighting scheme	numeric
21	TreeWeighted_Mutant_Blosum_score_0	BLOSUM62 score for the current nsSNP-containing column in the alignment after mutation using the phylogenetic tree weighting scheme	numeric
22	TreeWeighted_Blosum_score_delta0	Value Difference between the 15 attribute and 14th attribute	numeric
23	ET_Entropy_0	Entropy for the current nsSNP-containing column in the alignment using the evolutionary trace scheme	numeric
24	ET_Mutant_Entropy_0	Entropy for the current nsSNP-containing column in the alignment using the evolutionary trace scheme	numeric
25	ET_Entropy_delta0	Value Difference between the 24th attribute and 23rd attribute	numeric
26	ET_Blosum_score_0	BLOSUM62 score for the current nsSNP-containing column in the alignment using the evolutionary trace scheme	numeric
27	ET_Mutant_Blosum_score_0	BLOSUM62 score for the current nsSNP-containing column in the alignment after mutation using the evolutionary trace scheme	numeric
28	ET_Blosum_score_delta0	Value Difference between the 27th attribute and 26th attribute	numeric
29	MeanEntropy	The Mean of Entropy across all the columns of the alignment	numeric
30	StdEntropy	The Standard Deviation of Entropy across all the columns of the alignment	numeric
31	Z-Score_0	The Z-Score of Entropy of the current nsSNP-containing	numeric

		column	
32	Mutant_Z-Score_0	The Z-Score of Entropy of the current nsSNP-containing column after mutation	numeric
33	Z-Score_delta_0	Value Difference between the 32th attribute and 31th attribute	numeric
34	num_observ	Nnumber of Non-gap residues in the current nsSNP-containing column	numeric
35	Mutant_polarity	Polarity of the mutant residue	{pn,n,pp,p}
36	Mutant_hydrophathyIndex	Hydrophathy Index of the mutant residue	numeric
37	Mutant_mass	Mass of the mutant residue	numeric
38	Mutant_surface	Surface Area of the mutant residue	numeric
39	Mutant_volume	Volume of the mutant residue	numeric
40	Mutant_npsa	Non-Polar Surface Area of the mutant residue	numeric
41	Mutant_residueBurial	Estimated Hydrophobic Effect For Residue Burial of the mutant residue	numeric
42	Mutant_sideChainBurial	Estimated Hydrophobic Effect For Side Chain Burial of the mutant residue	numeric
43	Mutant_sea30	Occuring Percentage for Solvent Exposed Area higher than 30 square angstrom of the mutant residue	numeric
44	Mutant_sea10	Occuring Percentage for Solvent Exposed Area less than 10 square angstrom of the mutant residue	numeric
45	Mutant_sea1030	Occuring Percentage for Solvent Exposed Area between 10 and 30 square angstrom of the mutant residue	numeric
46	polarity_0	Polarity of the current residue	{n,pn,pp,p}
47	hydrophathyIndex_0	Hydrophathy Index of the current residue	numeric
48	hydrophathyIndex_delta_0	Value Difference between the 36th attribute and 47th attribute	numeric
49	mass_0	Mass of the current residue	numeric
50	mass_delta_0	Value Difference between the 37th attribute and 49th attribute	numeric
51	surface_0	Surface Area of the current residue	numeric
52	surface_delta_0	Value Difference between the 38th attribute and 51th attribute	numeric
53	volume_0	Volume of the current residue	numeric
54	volume_delta_0	Value Difference between the 39th attribute and 53th attribute	numeric

55	npsa_0	Non-Polar Surface Area of the current residue	numeric
56	npsa_delta_0	Value Difference between the 40th attribute and 55th attribute	numeric
57	residueBurial_0	Estimated Hydrophobic Effect For Residue Burial of the current residue	numeric
58	residueBurial_delta_0	Value Difference between the 41th attribute and 57th attribute	numeric
59	sideChainBurial_0	Estimated Hydrophobic Effect For Side Chain Burial of the current residue	numeric
60	sideChainBurial_delta_0	Value Difference between the 42th attribute and 59th attribute	numeric
61	sea30_0	Occuring Percentage for Solvent Exposed Area higher than 30 square angstrom of the current residue	numeric
62	sea30_delta_0	Value Difference between the 43th attribute and 61th attribute	numeric
63	sea10_0	Occuring Percentage for Solvent Exposed Area less than 10 square angstrom of the current residue	numeric
64	sea10_delta_0	Value Difference between the 44th attribute and 63th attribute	numeric
65	sea1030_0	Occuring Percentage for Solvent Exposed Area between 10 and 30 square angstrom of the current residue	numeric
66	sea1030_delta_0	Value Difference between the 45th attribute and 65th attribute	numeric
67	aa1	The Current Residue	{A,D,E,G,I,K,L,N,P,R,S,T,Y,M,Q,F,H,V,W,C}
68	aa2	The Mutant Residue	{E,V,P,G,K,R,D,W,F,S,T,L,H,Q,C,A,M,N,I,Y}
N/A	deleterious	Class Label indicating if the current nsSNP is deleterious or not	{'Deleterious','Not Deleterious'}