

Supplementary material 1.

Representative SAP54 ortholog's amino acid sequences used in this study

>B154

MFKNKNNLLLLLNAFIVFTFLGLFLIANNQQVMGMNKDIASSTNNNQNITNYSIEENIINLKYKIRENAVKKINTESEIQQLSN
NDPKKNTLLALKQNLLENLIHNQKEQLKTYQTLLKTLNDENN

>AB897827.1

MFKNKNNLLLLLNAFIVFTFLGLFLIANNQQVMGMNKDIASSTNNNQNITNYSIEENIINLKYKIRENAVKKINTESEIQQLSN
NDPKKNTLLALKQNLLENLIHNQKEQLKTYQTLLKTLNDENN

>LC740446.1

RWNNKGLTYEETSVNGFEFSSFDIGFDSYLENYVKLEKQFKEDSSGNCLILKYGPKHFLDDDDKYLGCAWVENSEFKNE
DFHLHFNPFRKTLISLYKDKHNNDKAKEAENNKRTSDGW

>LC740444.1

MFKNKNNLLLLLNAFIVFTFLGLFLIANNQQVMGMNKDIASSTNNNQNITNYSIEENIINLKYKIRENAVKKINTESEIQQLSN
NDPKKNTLLALKQNLLENLIHNQKEQLKTYQTLLKTLNDENN

>AB862489.1

MFKIKNNLLLLLNAFIVFTFLGLFLIANNQQVMGMNKDIASSTNNNQNITNYSIEENIINLKYKIRENAVKKINTESEIQQLSN
NDPKKNTLLALKQNLLENLIHNQKEQLKTYQTLLKTLNDENN

>LC740445.1

KHFLDEDDKYLGRRVSNFNLTFHLHFNPFRKTLISLYQDKHNNDKTQESQNNKRTSDDW

>LC740435.1

MFKIKNNLLLLLNAFIVFTFLGLFLIANNQQVMGMNKDIASSTNNNQNITNYSIEENIINLKYKIRENAVKKINTESEIQQLSN
NDPKKNTLLALKQNLLENLIHNQKEQLKTYQTLLKTLNDENN

>LC740441.1

RWNNKGVTYDMTTANGFEFSSFDKEIDSKLFLYVKLEKQLNEGPGGNYLILKYGPKHFLDDDDKYLGRRVSNFNLTF
NHLHFNPFRKTLISLYQDKHNNDKVQEAENKRTSDDW

>LC740431.1

MFKLKNNLLLLLNAFIVFTYLGLFLIANNQQVMGMNKDIASASNNNQNITNYSIEENIINLKYKIRENAVKKINTESEIQQLSN
NDPKKNTLLALKQNLLENLIHNQKEQLKTYQTLLKTLNDENN

>AB862478.1

MFKLKNNLLLLLNAFIVFTYLGLFLIANNQQVMGMNKDIASASNNNQNITNYSIEENIINLKYKIRENAVKKINTESEIQQLSN
NDPKKNTLLALKQNLLENLIHNQKEQLKTYQTLLKTLNDENN

>LC740449.1

RWNNKGVTYDMTTANGFEFSSFDKIDSKLFLYVKLEKQLNEGPGGNYLILKYGPKHFLDDDDKYLGRRVSDSNFELT
NHLHFNPVRKTLISLYQDKHNNDKVQEAENKRTSDDW

>LC740448.1

MFKLKNNLLLLLNAFIVFTYLGLFLIANNQQVMGMNKDIASASNNNQNITNYSIEENIINLKYKIRENAVKKINTESEIQQLSN
NDPKKNTLLALKQNLLENLIHNQKEQLKTYQTLLKTLNDENN

>MK858224.1

MFKIKNNLLLLLNAFIVFTLLGLFLITNNQQVMGMNKDIASASNNNQNITNYSIEENIINLKYKIRENAVKKINTESEIQQLSN
NDPKKNTLLALKQNLLENLINNQKKQLKTYQTLLKTLNDENN

>LC740447.1

RWNNKGLTYEETSINEFEYSSFDTEDDSQLYLYVNLEKQFKEDSSGNCLILKYGPKYFLDDDKDYLLGCAHVSNSNFKLTD
LNLHFNVPVRKTLSLYEDKHNDKQVQEAENNKRTSDDW

>LC740437.1

MFKIKNNLLLLLNAFIVFTLLGLFLITNNQQVMGMNKDIASASNNNQNITNYSIEENIINLKYKIRENAVKKINTESEIQQLSN
NDPKKNTLLALKQNLLENLINNQKKQLKTYQTLLKTLNDENN

>AB812838.1

MFKIKNNLLLLLNSFIVFAFLGLFLIANNQQVMGMNKDIASASNNNQNITNYSIEENIINLKYKIRKNAVKKINTEREIQQQLSN
NDPNKNTLLALKQNLLENLIHNQKEQLKTYQKLLKTLNDENN

>LC740451.1

RWNNKGLTYEETSINEFEYSSFDTEDDSQLYLYVNLEKQFKEDSSGNCLILKYGPKYFLDDDKDYLLGCAHVSNSNFKLTD
FNLHFNVPVRKTLSLYEDKHNDKQVQEAENNKRTSDDW

>LC740421.1

MFKIKNNLLLLLNAFIVFTLLGLFLITNNQQVMGMNKDIASASNNNQNITNYSIEENIINLKYKIRENAVKKINTESEIQQLSN
NDPKKNTLLALKQNLLENLINNQKKQLKTYQTLLKTLNDENN

>AB862483.1

MFKIKNNLLLLLNAFIVFTLLGLFLITNNQQVMGMNKDIASASNNNQNITNYSIEENIINLKYKIRENAVKKINTESEIQQLSN
NDPKKNTLLALKQNLLENLINNQKKQLKTYQTLLKTLNDENN

>MK419153.1

MFKIKNNLLLLLNAFIVFTLLGLFLITNNQQAMGMNKDIASASNNNQNITNYSIEENIINLKYKIRENAVKKINTESEIQQLSN
NDPKKNTLLALKQNLLENLINNQKKQLKTYQTLLKTLNDENN

>MH756633.1

MFRSKNQFKIIHLCLIAFIGLLFIFNNHQLMAMNNNEAGPSNNPSIEEMIIDTKNKIRDNANKKVNIEKEISQERNNQNNLQ
KIENLTQISNNLTLLIKNQKEQLKTYRKLLNTLND

Supplementary Table 1. The amino acid composition of SAP54 orthologs

Accession	Ala	Cys	Gly	Thr
PV610804.1	48.15	9.79	9.52	32.54
AB897827.1	48.15	9.79	9.52	32.54
LC740446.1	43.63	13.69	13.14	29.54
AB862480.1	48.94	9.52	8.99	32.54
LC740445.1	45.79	14.91	9.82	29.47
AB862478.1	47.88	9.52	9.79	32.80
MK858224.1	48.94	9.52	8.99	32.54
LC740447.1	44.31	13.41	11.65	30.62
AB862481.1	48.68	9.52	8.99	32.80
AB812838.1	47.88	9.26	9.52	33.33
AB862489.1	48.41	10.05	8.99	32.54
AB862484.1	48.15	9.52	8.99	33.33
AB862486.1	45.88	8.60	10.75	34.77
AB862477.1	48.94	9.26	8.99	32.80
AB862490.1	47.62	9.79	9.52	33.07
EF200537.1	41.38	15.97	11.19	31.47
AB897828.1	48.94	9.26	8.99	32.80
AB862487.1	48.94	9.26	8.99	32.80
AB862488.1	48.94	9.26	8.99	32.80
DQ837760.1	42.87	14.82	10.52	31.79
Average	46.34	11.55	10.10	32.01