Homo sapiens/49-81 Pan troglodytes/49-81 Bos taurus/50-82 Equus caballus/50-82 Mus musculus/50-82 Danio rerio/51-83 Gallus gallus/52-84 Xenopus laevis/52-84

DFYLSNRCCILYVTEADLVAGNGYRKRLVRVRN DFYLSNRCCILYVTEADLVAGNGYRKRLVRVRN DFYLSSKSCILYITEAELVAGNGYRKRLVRVRN DFYLSSRSCILYVTEADLVAGNGYRKRLVRVRN DFYLSSKSCILYVTEADLVAGHGYRKRLARFRN DFCLSNKTCVLYVSESDLVAGNGYRRKIVRFRN DFHLSNRICVLYISEADLVAGDEFKRRVVRFRN DFHLSNRTCILYISESDLVSGNAFRRRLVRFRK ERKXXXD

hxxhxGhGxxxAxxhh

Homo sapiens/155-215 Bos taurus/155-215 Equus caballus/155-215 Mus musculus/155-221 Danio rerio/154-215 Gallus gallus/157-215 Xenopus laevis/157-217

SEPSLLRTVQQIPGVGKVKAPLLLQKFPSIQQLSNASIGELEQVVGQAVAQQIHAFFTQPR--- 215 Pan troglodytes/155-215 SEPSLLRTVQQIPGVGKVKAPLLLQKFPSIQQLSNASIGELEQVVGQAVAQQIHAFFTQPR------ 215 SEPALLRSVQQIPGVGKVKAPLLLQRFPSIQQLSNASLRELEAVVGPAAAQRIHAFFSQPR----- 215 SELSLLRTVQQIPGVGKTKAVLLLQKFPSIQQLSNASVPDLEPVVGPAVAQHVHGFFTQSS----- 215 SELSLVQTVQQIPGVGKVKAPLLLQKFPSIQQLSNASVQELEEVVGPAAAQQIHTFFTQPKRQQPRS 221 LDPLVLSLVQQIPGVGKVKAQLLLQTFPSILQLSRASVQELEPVVGPATAQHIRGFFHNQIT---- 215 AEASVFRTVQQIPGVGKTKALLLLQQFGSIHQICNASVKELELVVGQTVAQQIHTFLGS----- 215 PDASVLQTVQKIPGVGRVKALQLLQHFPSIQKLSNASVAQLESVLGRAIALNIHSFFHTIT----- 217 hxxhxGhGxxxAxxhh hxxhx GhGxxxAxxhh

Homo sapiens/155-215 Pan troglodytes/155-215 Bos taurus/155-215 Equus caballus/155-215 Mus musculus/155-221 Danio rerio/154-215 Gallus gallus/157-215 Xenopus laevis/157-217

SEPSLLRTVQQIPGVGKVKAPLLLQKFPSIQQLSNASIGELEQVVGQAVAQQIHAFFTQPR----- 215 SEPSLLRTVQQIPGVGKVKAPLLLQKFPSIQQLSNASIGELEQVVGQAVAQQIHAFFTQPR----- 215 SEPALLRSVQQIPGVGKVKAPLLLQRFPSIQQLSNASLRELEAVVGPAAAQRIHAFFSQPR----- 215 SELSLLRTVQQIPGVGKTKAVLLLQKFPSIQQLSNASVPDLEPVVGPAVAQHVHGFFTQSS----- 215 SELSLVQTVQQIPGVGKVKAPLLLQKFPSIQQLSNASVQELEEVVGPAAAQQIHTFFTQPKRQQPRS 221 LDPLVLSLVQQIPGVGKVKAQLLLQTFPSILQLSRASVQELEPVVGPATAQHIRGFFHNQIT---- 215 AEASVFRTVQQIPGVGKTKALLLLQQFGSIHQICNASVKELELVVGQTVAQQIHTFLGS----- 215

PDASVLQTVQKIPGVGRVKALQLLQHFPSIQKLSNASVAQLESVLGRAIALNIHSFFHTIT----- 217

hxxhx GhGxxxAxxhh

Supplementary information, Figure S4 Alignment of the (HhH)₂ domain and schematics of FAAP24 mutants.