

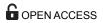
CORRECTION

Correction: Distribution and evolution of stable single α-helices (SAH domains) in myosin motor proteins

Dominic Simm, Klas Hatje, Martin Kollmar

The phrase "Mhc14 class-2 myosins (MYH14, non-muscle myosin 2C)" appears incorrectly throughout the article. The correct phrase should be, "Mhc14 class-2 myosins (MYH7B, myosin cardiac muscle beta chain)." Please see the corrected Fig 5 here.





Citation: Simm D, Hatje K, Kollmar M (2017) Correction: Distribution and evolution of stable single α -helices (SAH domains) in myosin motor proteins. PLoS ONE 12(5): e0177716. https://doi.org/10.1371/journal.pone.0177716

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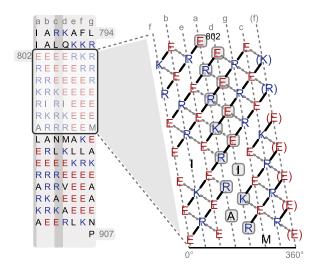
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A Acanthamoeba healyi Myo22C

window size 49 SAH-domain aa 788-901 SAH-domain score = 0.787 window size 14 SAH-domain-1 aa 798-899 SAH-domain score = 0.940

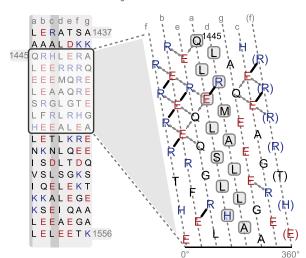
SAH-score of the region shown = 0.7684



C Homo sapiens Mhc14 (MYH7B)

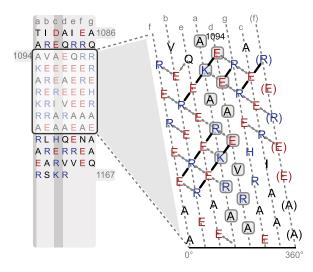
window size 49 SAH-domain --- SAH-domain score < 0.25 window size 14 SAH-domain aa 1449-1465 SAH-domain score = 0.489

SAH-score of the region shown = 0.1973



B Trypanosoma brucei Myo1

SAH-score of the region shown = 0.3854



D Homo sapiens Myo7A

window size 49 SAH-domain aa 880-914 window size 14 SAH-domain --

SAH-domain score = 0.314 SAH-domain score < 0.35

SAH-score of the region shown = 0.2983

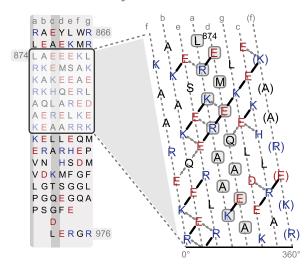


Fig 5. Examples of SAH-domains, and regions probably not containing SAH-domains. A) SAH-domain of *Acanthamoeba healyi* Myo22C, which is among the SAH-domains with the highest SAH-domain-scores. B) Example for a short SAH-domain, which is only detected with the 14, 21, and 28 amino acid window sizes for computing SAH-scores. This short SAH-domain is located C-terminal to the class-1 myosin-specific MyTH1 domain and therefore not part of the lever. Its putative function is to spatially separate the MyTH1 domain from another small domain or protein interaction motif of unknown function at the C-terminus. C) Example for a short SAH-domain with a SAH-domain-score in the twilight zone. This highly charged region is unique to mammalian Mhc14 class-2 myosins (MYH7B, myosin cardiac muscle beta chain; S6 Fig) and interrupts the long coiled-coil filament-forming region of the muscle myosins. The subsequent C-terminal sequence contains a large number of amino acids with high helix-breaking propensity such as glycines and serines. The putative function of the short SAH-domain and the following glycine-rich region might be to open up the coiled-coil. D) Example of a region rich in charged amino acids but with an SAH-domain-score in the range of non-SAH-domains.

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Reference

 Simm D, Hatje K, Kollmar M (2017) Distribution and evolution of stable single α-helices (SAH domains) in myosin motor proteins. PLoS ONE 12(4): e0174639. https://doi.org/10.1371/journal.pone.0174639 PMID: 28369123