

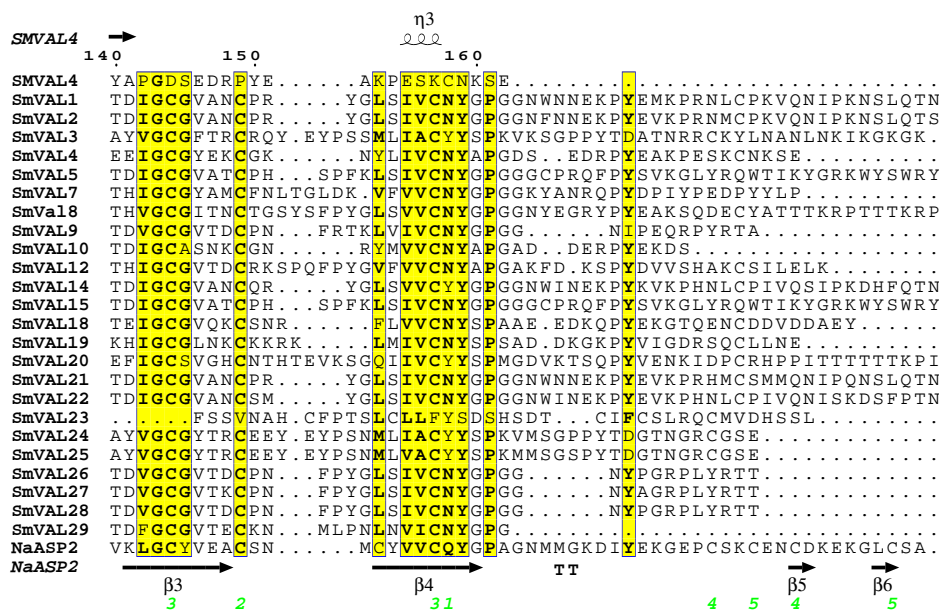
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Supporting information for article:

***Schistosoma mansoni* venom allergen-like protein 4 (SmVAL4) is a novel lipid-binding SCP/TAPS that lacks the prototypical CAP motifs**

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SMVAL4

SMVAL4
SmVAL1 SAHTQHGP⁴KPLTQSEERVSTNVQNGRR⁵ECNQREQLRSRY.....
SmVAL2 RAHTQH⁴VQKPIKQSQKKVSWIVQNGRKDRNQRKQSR⁵SR.....
SmVAL3
SmVAL4
SmVAL5 GRRCRPVYVKQRCNHTNERQLNRTPAIQKKRYKLIKQYLC⁴PNKQKV.....
SmVAL7
SmVAL8 TTTKRPSTTTTKRPGTTPTQKPGVPKQIPKPWPSIIISTWNEYATS⁴NMIQGIVTQT⁵CICV
SmVAL9
SmVAL10
SmVAL12WKRFNLN.....GQNCYCY
SmVAL14 RVHTRHGQKSINLREKKG...VKYRPK.....
SmVAL15 GRRCHREYVKQRCNHTNERQLNQTPVIQTKGYKLIKQYLC⁴PNKQKV.....
SmVAL18
SmVAL19
SmVAL20 TVTRKLQMG⁴PYGRYRCDC⁵KCQP.....
SmVAL21 SAHTQH⁴GQKPIKKSEERVSRNMQYGRRI⁵RLRVYPKYRD.....
SmVAL22 RAHTRRGQKSLKQIEKKG...VKYHSN.....
SmVAL23
SmVAL24
SmVAL25
SmVAL26
SmVAL27
SmVAL28
SmVAL29
NaASP2
NaASP2

SMVAL4

SMVAL4 .
SmVAL1 .
SmVAL2 .
SmVAL3 .
SmVAL4 .
SmVAL5 .
SmVAL7 .
SmVAL8 K
SmVAL9 .
SmVAL10 .
SmVAL12 L
SmVAL14 .
SmVAL15 .
SmVAL18 .
SmVAL19 .
SmVAL20 .
SmVAL21 .
SmVAL22 .
SmVAL23 .
SmVAL24 .
SmVAL25 .
SmVAL26 .
SmVAL27 .
SmVAL28 .
SmVAL29 .
NaASP2 .
NaASP2

Figure S.1. Comparison of the group 1 SmVALs. The group 1 SmVALs were aligned with clustalW2 and the illustrated secondary structural features are of the coordinates of SmVAL4 and NaASP2 (pdb entry 1u53). The alignment reveals that neither SmVAL4 nor NAASP2 can be accurately used to predict the structures of all the group1 SmVALs. Additionally, CAP tetrad, shown in arrow is conserved in some of the SmVALs. As with figure 2, this figure was generated with ESPript (Gouet *et al.*, 2003). The different secondary structure elements shown are alpha helices as large squiggles labelled (α), 3_{10} -helices as small squiggles labelled (η), beta strands as arrows (β), and beta turns (TT). Identical residues are shown in solid red, and conserved residues are highlighted yellow. The locations of the cysteine residues involved in disulfide bonds are numbered in green

The 29 *S. mansoni* SmVALs are the following: SmVAL1 ([AAV43180.1](#)), SmVAL2 ([XP_002571733.1](#)), SmVAL3 ([AAZ04923.2](#)), SmVAL4 ([XP_002571676.1](#)), SmVAL5 ([ABB88846.2](#)), SmVAL6 ([AAV28955.1](#)), SmVAL7 ([AAZ04924.1](#)), SmVAL8 ([ABW98681.1](#)), SmVAL9 ([XP_002582201.1](#)), SmVAL10 ([ABO09814.2](#)), SmVAL11 ([ABA54555.1](#)), SmVAL12 ([XP_002571731.1](#)), SmVAL13 ([ABB88843.1](#)), SmVAL14 ([XP_002569793.1](#)), SmVAL15 ([XP_002582174.1](#)), SmVAL16 ([XP_002571817.1](#)), SmVAL17 ([XP_002578833.1](#)), SmVAL18 ([XP_002571658.1](#)), SmVAL19 ([XP_002571657.1](#)), SmVAL20 ([CAZ28636.1](#)), SmVAL21 ([XP_002578075.1](#)), SmVAL22 ([XP_002574629.1](#)), SmVAL23 ([XP_002582175.1](#)), SmVAL24 ([XP_002574962.1](#)), SmVAL25 ([XP_002574963.1](#)), SmVAL26 ([XP_002577262.1](#)), SmVAL27 ([XP_002577271.1](#)), SmVAL28 ([XP_002582199.1](#)) and SmVAL29 ([XP_002571340.1](#)).