

Table S1. Metazoan resources searched to identify sequences for this study.

Phylum	Organism	Resource	Reference
Ctenophora	<i>Mnemiopsis leidyi</i>	http://research.nhgri.nih.gov/mnemiopsis/blast/	(Ryan et al. 2013)
Porifera	<i>Oscarella carmella</i>	http://www.compagen.org/index.html	(Nichols et al. 2012)
	<i>Suberites domuncula</i>	NCBI: http://www.ncbi.nlm.nih.gov/	(Harcet et al. 2010)
	<i>Amphimedon queenslandica</i>	http://metazoa.ensembl.org/Amphimedon_queenslandica	(Srivastava et al. 2010)
Placozoa	<i>Trichoplax adhaerens</i>	http://genome.jgi-psf.org/Triad1/Triad1.home.html	(Srivastava et al. 2008)
Cnidaria	<i>Nematostella vectensis</i>	http://genome.jgi-psf.org/Nemve1/Nemve1.home.html	(Putnam et al. 2007)
	<i>Anthopleura elegantissima</i>	http://people.oregonstate.edu/~meyere/data.html	(Kitchen et al. 2015)
	<i>Aiptasia pallida</i>	http://pringlelab.stanford.edu/projects.html	(Lehnert et al. 2012) (Baumgarten et al. 2015)
	<i>Acropora digitifera</i>	http://marinegenomics.oist.jp/genomes/gallery	(Shinzato et al. 2011)
	<i>Acropora millepora</i>	http://www.bio.utexas.edu/research/matz_lab/matzlab/Data.html	(Moya et al. 2012)
	<i>Fungia scutaria</i>	http://people.oregonstate.edu/~meyere/data.html	(Kitchen et al. 2015)
Nemotoda	<i>Caenorhabditis elegans</i>	http://www.wormbase.org/	(Stein et al. 2001)
Arthropoda	<i>Drosophila melanogaster</i>	NCBI: http://www.ncbi.nlm.nih.gov/	
Echinodermata	<i>Strongylocentrotus purpuratus</i>	http://www.spbase.org/SpBase/	(Cameron et al. 2009)
Chordata	<i>Ciona intestinalis</i>	http://genome.jgi-psf.org/Cioin2/Cioin2.home.html	(Dehal et al. 2002)
	<i>Branchiostoma floridae</i>	http://genome.jgi-psf.org/Brafl1/Brafl1.home.html	(Putnam et al. 2008)
	<i>Xenopus laevis</i>	NCBI: http://www.ncbi.nlm.nih.gov/	(Klein et al. 2002)
	<i>Danio rerio</i>	NCBI: http://www.ncbi.nlm.nih.gov/	
	<i>Mus musculus</i>	NCBI: http://www.ncbi.nlm.nih.gov/	
	<i>Homo sapiens</i>	NCBI: http://www.ncbi.nlm.nih.gov/	

Consensus	1	10	20	30	40	50	60	70
Identity	VVLV	---	---	---	---	---	---	---
1. O.carmela_1	VVLV	---	---	---	---	---	---	---
2. S.domuncula	VVLV	---	---	---	---	---	---	---
3. M.leidy	VVLV	---	---	---	---	---	---	---
4. A.queenslandica	VVLV	---	---	---	---	---	---	---
5. F.scutaria_2	VVLV	---	---	---	---	---	---	---
6. A.millepora_1	VVLV	---	---	---	---	---	---	---
7. N.vectensis_1	VVLV	---	---	---	---	---	---	---
8. A.pallida_1	VVLV	---	---	---	---	---	---	---
9. A.pallida_3	VVLV	---	---	---	---	---	---	---
10. N.vectensis_2	VVLV	---	---	---	---	---	---	---
11. F.scutaria	VVLV	---	---	---	---	---	---	---
12. A.digitifera	VVLV	---	---	---	---	---	---	---
13. A.millepora_2	VVLV	---	---	---	---	---	---	---
14. N.vectensis_3	VVLV	---	---	---	---	---	---	---
15. A.pallida_2	VVLV	---	---	---	---	---	---	---
16. A.elegantissima	VVLV	---	---	---	---	---	---	---
17. T.adherans	VVLV	---	---	---	---	---	---	---
18. C.intestinalis_1	VVLV	---	---	---	---	---	---	---
19. D.rrerio_LMP2	VVLV	---	---	---	---	---	---	---
20. X.laevius	VVLV	---	---	---	---	---	---	---
21. M.musculus_LMP2	VVLV	---	---	---	---	---	---	---
22. H.sapiens_LMP2	VVLV	---	---	---	---	---	---	---
23. S.purpuratus_2	VVLV	---	---	---	---	---	---	---
24. B.floridae	VVLV	---	---	---	---	---	---	---
25. C.intestinalis_2	VVLV	---	---	---	---	---	---	---
26. D.rrerio_CD36	VVLV	---	---	---	---	---	---	---
27. M.musculus_CD36	VVLV	---	---	---	---	---	---	---
28. H.sapiens_CD36	VVLV	---	---	---	---	---	---	---
29. C.elegans	VVLV	---	---	---	---	---	---	---
30. D.melanogaster_pste	VVLV	---	---	---	---	---	---	---
31. D.melanogaster_croq	VVLV	---	---	---	---	---	---	---
32. S.purpuratus_1	VVLV	---	---	---	---	---	---	---
33. D.melanogaster_EMP	VVLV	---	---	---	---	---	---	---
34. D.rrerio_SRB1	VVLV	---	---	---	---	---	---	---
35. M.musculus_SRB1	VVLV	---	---	---	---	---	---	---
36. H.sapiens_SRB1	VVLV	---	---	---	---	---	---	---
Consensus	NITFN-DNGA	---	---	---	---	---	---	---
Identity	NITFN	DNGA	---	---	---	---	---	---
1. O.carmela_1	DPOQV	ENDDI	---	---	---	---	---	---
2. S.domuncula	DPOQV	ENDDI	---	---	---	---	---	---
3. M.leidy	DPOQV	ENDDI	---	---	---	---	---	---
4. A.queenslandica	DPOQV	ENDDI	---	---	---	---	---	---
5. F.scutaria_2	DPOQV	ENDDI	---	---	---	---	---	---
6. A.millepora_1	DPOQV	ENDDI	---	---	---	---	---	---
7. N.vectensis_1	DPOQV	ENDDI	---	---	---	---	---	---
8. A.pallida_1	DPOQV	ENDDI	---	---	---	---	---	---
9. A.pallida_3	DPOQV	ENDDI	---	---	---	---	---	---
10. N.vectensis_2	DPOQV	ENDDI	---	---	---	---	---	---
11. F.scutaria	DPOQV	ENDDI	---	---	---	---	---	---
12. A.digitifera	DPOQV	ENDDI	---	---	---	---	---	---
13. A.millepora_2	DPOQV	ENDDI	---	---	---	---	---	---
14. N.vectensis_3	DPOQV	ENDDI	---	---	---	---	---	---
15. A.pallida_2	DPOQV	ENDDI	---	---	---	---	---	---
16. A.elegantissima	DPOQV	ENDDI	---	---	---	---	---	---
17. T.adherans	DPOQV	ENDDI	---	---	---	---	---	---
18. C.intestinalis_1	DPOQV	ENDDI	---	---	---	---	---	---
19. D.rrerio_LMP2	DPOQV	ENDDI	---	---	---	---	---	---
20. X.laevius	DPOQV	ENDDI	---	---	---	---	---	---
21. M.musculus_LMP2	DPOQV	ENDDI	---	---	---	---	---	---
22. H.sapiens_LMP2	DPOQV	ENDDI	---	---	---	---	---	---
23. S.purpuratus_2	DPOQV	ENDDI	---	---	---	---	---	---
24. B.floridae	DPOQV	ENDDI	---	---	---	---	---	---
25. C.intestinalis_2	DPOQV	ENDDI	---	---	---	---	---	---
26. D.rrerio_CD36	DPOQV	ENDDI	---	---	---	---	---	---
27. M.musculus_CD36	DPOQV	ENDDI	---	---	---	---	---	---
28. H.sapiens_CD36	DPOQV	ENDDI	---	---	---	---	---	---
29. C.elegans	DPOQV	ENDDI	---	---	---	---	---	---
30. D.melanogaster_pste	DPOQV	ENDDI	---	---	---	---	---	---
31. D.melanogaster_croq	DPOQV	ENDDI	---	---	---	---	---	---
32. S.purpuratus_1	DPOQV	ENDDI	---	---	---	---	---	---
33. D.melanogaster_EMP	DPOQV	ENDDI	---	---	---	---	---	---
34. D.rrerio_SRB1	DPOQV	ENDDI	---	---	---	---	---	---
35. M.musculus_SRB1	DPOQV	ENDDI	---	---	---	---	---	---
36. H.sapiens_SRB1	DPOQV	ENDDI	---	---	---	---	---	---
Consensus	---	DFV	---	---	---	---	---	---
Identity	---	DFV	---	---	---	---	---	---
1. O.carmela_1	---	IRKDFRA	---	---	---	---	---	---
2. S.domuncula	---	IRKDFRA	---	---	---	---	---	---
3. M.leidy	---	IRKDFRA	---	---	---	---	---	---
4. A.queenslandica	---	IRKDFRA	---	---	---	---	---	---
5. F.scutaria_2	---	IRKDFRA	---	---	---	---	---	---
6. A.millepora_1	---	IRKDFRA	---	---	---	---	---	---
7. N.vectensis_1	---	IRKDFRA	---	---	---	---	---	---
8. A.pallida_1	---	IRKDFRA	---	---	---	---	---	---
9. A.pallida_3	---	IRKDFRA	---	---	---	---	---	---
10. N.vectensis_2	---	IRKDFRA	---	---	---	---	---	---
11. F.scutaria	---	IRKDFRA	---	---	---	---	---	---
12. A.digitifera	---	IRKDFRA	---	---	---	---	---	---
13. A.millepora_2	---	IRKDFRA	---	---	---	---	---	---
14. N.vectensis_3	---	IRKDFRA	---	---	---	---	---	---
15. A.pallida_2	---	IRKDFRA	---	---	---	---	---	---
16. A.elegantissima	---	IRKDFRA	---	---	---	---	---	---
17. T.adherans	---	IRKDFRA	---	---	---	---	---	---
18. C.intestinalis_1	---	IRKDFRA	---	---	---	---	---	---
19. D.rrerio_LMP2	---	IRKDFRA	---	---	---	---	---	---
20. X.laevius	---	IRKDFRA	---	---	---	---	---	---
21. M.musculus_LMP2	---	IRKDFRA	---	---	---	---	---	---
22. H.sapiens_LMP2	---	IRKDFRA	---	---	---	---	---	---
23. S.purpuratus_2	---	IRKDFRA	---	---	---	---	---	---
24. B.floridae	---	IRKDFRA	---	---	---	---	---	---
25. C.intestinalis_2	---	IRKDFRA	---	---	---	---	---	---
26. D.rrerio_CD36	---	IRKDFRA	---	---	---	---	---	---
27. M.musculus_CD36	---	IRKDFRA	---	---	---	---	---	---
28. H.sapiens_CD36	---	IRKDFRA	---	---	---	---	---	---
29. C.elegans	---	IRKDFRA	---	---	---	---	---	---
30. D.melanogaster_pste	---	IRKDFRA	---	---	---	---	---	---
31. D.melanogaster_croq	---	IRKDFRA	---	---	---	---	---	---
32. S.purpuratus_1	---	IRKDFRA	---	---	---	---	---	---
33. D.melanogaster_EMP	---	IRKDFRA	---	---	---	---	---	---
34. D.rrerio_SRB1	---	IRKDFRA	---	---	---	---	---	---
35. M.musculus_SRB1	---	IRKDFRA	---	---	---	---	---	---
36. H.sapiens_SRB1	---	IRKDFRA	---	---	---	---	---	---
Consensus	---	---	---	---	---	---	---	---
Identity	---	---	---	---	---	---	---	---
1. O.carmela_1	---	SLQVNS	---	---	---	---	---	---
2. S.domuncula	---	SLQVNS	---	---	---	---	---	---
3. M.leidy	---	SLQVNS	---	---	---	---	---	---
4. A.queenslandica	---	SLQVNS	---	---	---	---	---	---
5. F.scutaria_2	---	SLQVNS	---	---	---	---	---	---
6. A.millepora_1	---	SLQVNS	---	---	---	---	---	---
7. N.vectensis_1	---	SLQVNS	---	---	---	---	---	---
8. A.pallida_1	---	SLQVNS	---	---	---	---	---	---
9. A.pallida_3	---	SLQVNS	---	---	---	---	---	---
10. N.vectensis_2	---	SLQVNS	---	---	---	---	---	---
11. F.scutaria	---	SLQVNS	---	---	---	---	---	---
12. A.digitifera	---	SLQVNS	---	---	---	---	---	---
13. A.millepora_2	---	SLQVNS	---	---	---	---	---	---
14. N.vectensis_3	---	SLQVNS	---	---	---	---	---	---
15. A.pallida_2	---	SLQVNS	---	---	---	---	---	---
16. A.elegantissima	---	SLQVNS	---	---	---	---	---	---
17. T.adherans	---	SLQVNS	---	---	---	---	---	---
18. C.intestinalis_1	---	SLQVNS	---	---	---	---	---	---
19. D.rrerio_LMP2	---	SLQVNS	---	---	---	---	---	---
20. X.laevius	---	SLQVNS	---	---	---	---	---	---
21. M.musculus_LMP2	---	SLQVNS	---	---	---	---	---	---
22. H.sapiens_LMP2	---	SLQVNS	---	---	---	---	---	---
23. S.purpuratus_2	---	SLQVNS	---	---	---	---	---	---
24. B.floridae	---	SLQVNS	---	---	---	---	---	---
25. C.intestinalis_2	---	SLQVNS	---	---	---	---	---	---
26. D.rrerio_CD36	---	SLQVNS	---	---	---	---	---	---
27. M.musculus_CD36	---	SLQVNS	---	---	---	---	---	---
28. H.sapiens_CD36	---	SLQVNS	---	---	---	---	---	---
29. C.elegans	---	SLQVNS	---	---	---	---	---	---
30. D.melanogaster_pste	---	SLQVNS	---	---	---	---	---	---
31. D.melanogaster_croq	---	SLQVNS	---	---	---	---	---	---
32. S.purpuratus_1	---	SLQVNS	---	---	---	---	---	---
33. D.melanogaster_EMP	---	SLQVNS	---	---	---	---	---	---
34. D.rrerio_SRB1	---	SLQVNS	---	---	---	---	---	---
35. M.musculus_SRB1	---	SLQVNS	---	---	---	---	---	---
36. H.sapiens_SRB1	---	SLQVNS	---	---	---	---	---	---
Consensus	---	---	---	---	---	---	---	---
Identity	---	---	---	---	---	---	---	---
1. O.carmela_1	---	FIDDL	---	---	---	---	---	---
2. S.domuncula	---	FIDDL	---	---	---	---	---	---
3. M.leidy	---	FIDDL	---	---	---	---	---	---
4. A.queenslandica	---	FIDDL	---	---	---	---	---	---
5. F.scutaria_2	---	FIDDL	---	---	---	---	---	---
6. A.millepora_1	---	FIDDL	---	---	---	---	---	---
7. N.vectensis_1	---	FIDDL	---	---	---	---	---	---
8. A.pallida_1	---	FIDDL	---	---	---	---	---	---
9. A.pallida_3	---	FIDDL	---	---	---	---	---	---
10. N.vectensis_2	---	FIDDL	---	---	---	---	---	---
11. F.scutaria	---	FIDDL	---	---	---	---	---	---
12. A.digitifera	---	FIDDL	---	---	---	---	---	---
13. A.millepora_2	---	FIDDL	---	---	---	---	---	---
14. N.vectensis_3	---	FIDDL	---	---	---	---	---	---
15. A.pallida_2	---	FIDDL	---	---	---	---	---	---
16. A								

Figure S1. Multiple sequence alignment of the CD36 domain from SR-B homologues of cnidarians and select other metazoans. Cnidarian proteins lack one of the three pairs of cysteine residues known to form three disulphide bridges in the human CD36 protein. All six cnidarian species have a pair of cysteine residues at positions C107 and C117.

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