

Table S1: List of proteins involved in temporary adhesion for which full-length sequences have been deposited in the National Center for Biotechnology Information.

Species	Protein	Length [aa]	Signal peptide	Annotated protein domains	accession number	References
<i>Asterias rubens</i>	Sfp-1	3853	yes	<ul style="list-style-type: none"> • 5 Discoidin-like (F5/8 type C) domains • 3 von Willebrand factor type D domains • 3 Galatose binding lectin domain • 2 C8 domains • 1 Calcium-binding EGF-like domain 	AHN92641	(Hennebert et al., 2014)
<i>Paracentrotus lividus</i>	Nectin-1 Nectin-2	984	yes	<ul style="list-style-type: none"> • 6 Discoidin-like (F5/8 type C) domains 	AJ578435 KZ351732	(Lebesgue et al., 2016) (Toubarro et al., 2016)
<i>Balanus amphitrite</i>	SIPC	1547	yes	<ul style="list-style-type: none"> • Alpha-2-macroglobulin like protein 	AAR33079.1	(Dreanno et al., 2006a) (Dreanno et al., 2006b) (Petronne et al., 2015)

Table S2: List of lectin labelling in adhesive tissues and footprints of temporary adhering species. Explanation: + labelling, - no labelling, n.a. not tested.

Lectin	Acro- nym	Preferred sugar specificity	<i>Asterias rubens</i>			<i>Asterina gibbosa</i>		<i>Macrostomum lignano</i>	<i>Schmidtea mediterranea</i>	<i>Idiosepius pygmaeus</i>	<i>Idiosepius biserialis</i>
			adhesive epidermis	foot- prints	footprint protein extracts	adhesive epidermis	foot- prints	adhesive glands	adhesive glands	adhesive glands	adhesive glands
Concanavale A	Con A	α Man, α Glc	+	+	+	+	+	-	-	+	+
Wheat germ agglutinin	WGA	GlcNAc	+	+	+	+	-	-	+	+	+
Peanut agglutinin	PNA	Gal β 3GalNAc	-	-	+	+	-	+	+	+	+
Soybean agglutinin	SBA	α > β GalNAc	+	-	-	+	-	-	+	+	+
<i>Griffonia (Bandeiraea) simplicifolia</i> lectin I	GSL I	α Gal, α GalNAc	+	-	+	+	-	-	-	n.a.	n.a.
Succinylated wheat germ agglutinin	sWGA	GlcNAc	-	-	-	+	-	-	+	n.a.	n.a.
<i>Lens culinaris</i> agglutinin	LCA	α Man, α Glc	-	-	-	+	-	-	-	n.a.	n.a.
<i>Pisum sativum</i> agglutinin	PSA	α Man, α Glc	-	-	-	+	-	n.a.	-	n.a.	n.a.
<i>Ricinus communis</i> agglutinin I	RCA I	Gal, GalNAc	+	+	+	+	-	+	+	n.a.	n.a.
<i>Ulex europaeus</i> agglutinin 1	UEA 1	L-Fuc	+	-	+	-	-	-	-	n.a.	n.a.
<i>Maackia amurensis</i> lectin II	MAL II	Neu5Ac α 3Gal β 4 GalNAc	+	-	+	-	-	-	-	n.a.	n.a.
<i>Dolichos bilforus</i> agglutinin	DBA	α GalNAc	+	+	+	-	-	-	+	n.a.	n.a.
<i>Sambucus nigra</i> agglutinin	SNA	Neu5Ac α 6Gal/G alNAc	+	-	-	-	-	-	n.a.	+	+
<i>Phaseolus vulgaris</i> erythro agglutinin	PHA- E	Gal β 4GlcNAc β 2 Man α 6(GlcNAc β 4)(GlcNAc β 4M an α 3)Man β 4	+	-	-	-	-	-	n.a.	n.a.	n.a.
<i>Phaseolus vulgaris</i> leuco agglutinin	PHA- L	Gal β 4GlcNAc β 6 (GlcNAc β 2Man α 3)Man α 3	+	-	-	-	-	-	n.a.	n.a.	n.a.

<i>Sophora Japonica</i> agglutinin	SJA	β GalNAc	-	-	+	-	-	-	n.a.	n.a.	n.a.
<i>Erythrina cristagalli</i> lectin	ECL	Gal β 4GlcNAc	n.a.	n.a.	n.a.	-	-	n.a.	+	n.a.	n.a.
<i>Griffonia (Bandeiraea) simplicifolia</i> lectin II	GSL II	α or β GlcNAc	n.a.	n.a.	n.a.	+	-	n.a.	+	n.a.	n.a.
Jacalin	Jacalin	Gal β 3GalNAc	n.a.	n.a.	n.a.	+	-	n.a.	+	n.a.	n.a.
<i>Vicia villosa</i> agglutinin	VVA	GalNAc	n.a.	n.a.	n.a.	+	-	n.a.	+	n.a.	n.a.
<i>Datura Stramonium</i> lectin	DSL	(GlcNAc) ₂₋₄	n.a.	n.a.	n.a.	+	-	n.a.	-	n.a.	n.a.
<i>Lycopersicon esculentum</i> (tomato) lectin	LEL	(GlcNAc) ₂₋₄	n.a.	n.a.	n.a.	+	-	n.a.	-	n.a.	n.a.
<i>Anguilla Anguilla</i> agglutinin	AAA	α -L-fucose	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	+	+
<i>Galanthus nivalis</i> agglutinin	GNA	α Man	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	+	+
Reference		Vector laboratories	Hennebert et al. 2011			Lengerer et al. submitted		Lengerer et al. 2016	Zayas et al., 2010	Von Byern et al., 2007	Von Byern et al., 2007