

Table S1. ITSN1 yeast two-hybrid results

aa coordinates	Prey Name	Accession#	Prey description	Prey-regions bound	Library screened*	Functional Pathways**
1-118	EPSIN2a	NP_683723	epsin 2a	320-422	a	1, 2
	mEpsin2	NP_034278	intersectin-EH binding protein 2	337-595	b	1, 2
	CALM	NP_009097	clathrin assembly protein lymphoid myeloid leukemia	413-652	c	1, 2
	mPICALM	NP_666306	phosphatidylinositol binding clathrin assembly protein	380-665	b	1, 2
	FNBP4	NP_056123	formin binding protein 4	468-618	a	2
	ZFPM2; FOG2	NP_036214	transcription factor GATA4, modulator of; friend of GATA2	417-938	a	6
	HRB	NP_004495	HIV-1 Rev binding protein; necleoporin-like protein	71-562	c	3, 4
	mHRBL	NP_835456	HIV-1 Rev-binding protein-like protein	59-479; 296-479; 342-479;305-481	b	3, 4
1-313	RAB11-FIP2	Q7L804	rab11-family interacting protein 2	98-512	a	3, 4
	mPICALM		phosphatidylinositol binding clathrin assembly protein	310	c	1, 2
	Dab2	NP_001334	disabled-2	242-770	c	1
	HRB	NP_004495	HIV-1 Rev binding protein; necleoporin-like protein	178-484; 512;562	c	3, 4
	mHRB	NP_034602	HIV-1 Rev binding protein; necleoporin-like protein	488-559	b	3, 4
	HRB like	NP_006067	HIV-1 Rev binding protein-like	305-481	c	3, 4
	mPICALM	NP_666306	phosphatidylinositol binding clathrin assembly protein	310-665	b	1, 2
204-320	mEpsin2	NP_034278	intersectin-EH binding protein 2	337-595	b	1, 2
204-522	CYLN2	NP_003379	cytoplasmic linker protein, 115 kD	716-959	a	5
	EPS15L	NP_067058	Eps15-like	247-489	a	1, 3
	mEPS15L1	NP_031970	mouse Eps15-like	169-463; 192-419	b	1, 3
	GOLGA5	NP_005104	golgi autoantigen, golgin subfamily a, 5	198-501	a	3, 4
	ITSN1	NP_003015	intersectin 1	204-334	a	1-7
	mAMOTL1	BAB30287	angiomotin-like 1	438-691; 430-635; 255-521; 410-548	b	5
	mBECN1	AAH05770	BCL2-interacting protein	34-394; 20-360; 35-251; 11-244; 171-261	b	3
	mHMG20A	NP_080088	High mobility group 20A	189-346	b	6

	mKRT2-1	NP_032499	keratin complex 2; keratin 1, type II	155-454; 194-453	b	5
	mKRT2-6G	NP_064340	keratin complex 2, gene 6g	185-398	b	5
	mLOC223917	NP_666175	hypothetical protein mLOC223917, similar to human keratin 6	161-390	b	5
	mPPL	NP_032935	periplakin	1125-1323; 814-1062	b	5
	PPL	O60437	periplakin	787-1104; 842-1258	a	5
	mSWAP70	NP_033328	SWAP complex protein, 70 kDa	315-516	b	3, 4
	PIK3R1	NP_852665	p85a phosphoinositide-3-kinase, regulatory subunit 1	309-552	a	3, 4
	PPFIA2	NP_003616	protein-tyrosine phosphatase, receptor type, f polypeptide-interacting protein alpha 2	359-760; 385-762	a	2-4
	PSCD1	Q15438	cytohesin; pleckstrin homology, Sec7 and coiled/coil domains 1	11-249	c	3, 4
	RNF40	O75150	Ring finger 40 Ub ligase	207-495	a	3
350-660	CCDC99	NP_060255	coiled-coil domain containing 99; Spindly protein-reg kineticores	67-288; 67-289	d	5
	CLTC	NP_004850	clathrin heavy chain 1	934-1177	d	1
	DESM	Q15787	desmin	350-469; 336-469; 127-299; 356-448; 353-429; -18-140; 297-460; 255-358; 339-448; 268-389;	d	5
	EPS15	NP_001972	EGFR substrate protein 15	121-390	d	1, 3
	KIF16B	NP_078980	kinesin family member 16B	805-957	d	1, 3, 5
520-809	ARFIP2	NP_036534	arfaptin/ POR1	29-331	c	2-4
	DESM	Q15787	desmin	140-465; 166-469; 254-469	d	5
	FBNP1	NP_055848	formin binding protein 1; FBP17	47-107	c	1-5
	GCC1	NP_078799	golgi coiled-coil 1	395-592	a	5
	GOLGA5	NP_005104	golgi autoantigen, golgin subfamily a, 5	198-501	a	3, 4
	HIP1	O00291	huntingtin-interacting protein 1	5-341	c	1-3
	MTUS2/ KIAA0774	NP_00102877 4	cardiac zipper protein; MT associated protein TIP150	932-1253	a	5
	mKRT2-1	NP_032499	keratin complex 2; keratin 1, type II	383-634; 416-615; 416-637; 214-498; 438-552; 168-537	b	5
	mSYNC	Q9EPM5	syncoilin	8-293	b	5
	NY-BR-15	NP_00103594 0	similar to serologically defined breast cancer antigen NY-BR-15	340-759	c	8

	PACSIN3	NP_057307	protein kinase C and casein kinase substrate in neurons 3	29-307; 152-298; 35-303	a	1, 2, 5
	PDCD6IP	NP_037506	Alix, ALG-2 interacting protein	359-540	e	1
	PREX1	NP_065871	P-REX-1	1012-1422	c	3, 4
	RABEP1	NP_004694	rabaptin-5;	466-737; 466-728	a	1, 3, 4
	RAI14	NP_056392	retinoic acid induced 14; novel retinal pigment epithelial gene; RAI13;	388-781	c	8
	SCOCO	NP_115936	short coiled-coil protein; binds Arf like protein	24-122	d	3, 4
	TRIM8	NP_112174	tripartite motif-containing 8; ring finger protein 27; RNF27	6-306	c	3
709-981	Dab2	NP_001334	Disabled-2	333-770	c	1
	PI3KC2β	Y13892	PI3K class 2 β isoform	18-476	c	3
730-816	Dab2	NP_001334	Disabled-2	501-720; 242-770; 507-770; 317-722	c	1
	PI3KC2β	Y13892	PI3K class 2 β isoform	18-475; 18-480	c	3
	FAM59B	NP_00116171 3.1	family with sequence similarity 59, member B,	411-609	a	8
	mLOC244310	NP_766498	Guanylate kinase associated protein; DLGAP2, SAPAP2	303-673	b	5
	mPLVAP	NP_115774	plasmalemma vesicle associated protein	123-438; 211-438	b	5
	SPRY2	NP_005833	sprouty 2	133-315	c	3, 4
	mSPRY2	NM_011897	mouse sprouty 2	31-315	b	3, 4
	SAPAP1	O14490	PSD-95/SAP90-associated protein 1; guanylate kinase-associated protein 1; GKAP1	4-282	a	5
	SYNJ2b	O15056	synaptojanin 2b	1189-1443	a	1
807-912	AP2B1	NP_001273	adaptor-related protein complex 2, beta 1 subunit, isoform b	632-937	a	1
1064-1148	FCHSD2	NP_055639	nervous wreck; NWK	465-654; 244-600; 214-584	c	2, 5
1220-1500	mTIAM-1:	U05245	T-cell lymphoma invasion and metastasis 1	470-827	b	3, 4
1460-1500	mTRP51	NP_035770	p53 tumor suppressor	26-390	b	6

*Library screened: a. brain; b. mouse embryo; c. spleen; d. skeletal muscle; e. macrophage.

**Functional Pathways: 1. Endocytosis/trafficking; 2. membrane curvature; 3. signal transduction; 4. GTPase regulation; 5. cytoskeleton; 6. nuclear function; 7. other; 8. unknown.

ITSN1 binding proteins that have not identified by previous studies are highlighted in yellow