Table S1. The sugar-binding specificities of the lectins

Lectin	Abbreviation	Ratio(C/N)	Specificity	Print monosaccharide
Solanum Tuberosum (Potato) Lectin	STL	2.5***	$(GlcNAc)_n$	GlcNAc
Lycopersicon Esculentum (Tomato) Lectin	LTL	2.8***	Poly-LacNAc and $(GlcNAc)_n$	LacNAc
Bandeiraea simplicifolia	BS-I	4***	αGal and αGalNAc	Galactose
Soybean Agglutinin	SBA	4.6***	Terminal GalNAc(especially GalNAcα1-3Gal)	GalNAc
Triticum vulgaris	WGA	5.4***	Terminal GlcNAc and (GlcNAc)n, and Sialic acid	GlcNAc
Sambucus Nigra Lectin	SNA	2.3***	Sia2-6Galβ1-4Glc(NAc)	GlcNAc

Note:

►Ratio(C/N):relative signal intensity of lectins in colon cancer *vs* normal tissues

►***:$p<0.001$

Table S2. Clinical features of human tissue samples used for IHC experiment

Paired number	Gender	Age	Grade
1	Male	64	II
2	Famale	72	III
3	Male	70	III
4	Male	49	I
5	Male	33	II
6	Female	63	II
7	Female	53	II
8	Male	48	I
9	Male	55	II
10	Female	50	II

Table S3. Identification and relative quantitation of STL-enriched proteins in normal *vs* colon cancer tissues through quantitative glycoproteomics analysis

IPI	Protein name	Replicate 1		Replicate 2	
Accession		Ratio(C/N)	p-value	Ratio(C/N)	p-value
IPI01018712	ACTA2 protein Fragment	16.67	0.99	-	
IPI00021428	Actin alpha skeletal muscle	1.14	0.58	-	
IPI00008603	Actin aortic smooth muscle	N		N	
IPI00021439	Actin cytoplasmic 1	1.05	0.42	1.16	0.46
IPI00025416	Actin gamma enteric smooth muscle	0.85	0.39	-	
IPI00916212	Actin gamma enteric smooth muscle isoform 2 precursor	0.97	0.28	-	
IPI00003269	Beta actin like protein 2	5.26	0.99	-	
IPI00888712	Putative beta actin like protein 3	10	0.99	-	
IPI00218918	Annexin A1	-		C	
IPI00418169	Isoform 2 of Annexin A2	-		1.41	0.69
IPI00334627	Putative annexin A2 like protein	C		-	
IPI00872780	cDNA FLJ51794 highly similar to Annexin A4	C		-	
IPI00329801	Annexin A5	-		1.33	0.61
IPI00221226	Annexin A6	-		1.27	0.58
IPI00784295	Isoform 1 of Heat shock protein HSP 90 alpha	1.72	0.99	1.54	0.98
IPI00382470	Isoform 2 of Heat shock protein HSP 90 alpha	0.96	0.29	1.12	0.34
IPI00414676	Heat shock protein HSP 90 beta	1.45	0.99	1.72	0.99
IPI00555614	Putative heat shock protein HSP 90 beta 3	2.08	0.99	-	
IPI00410714	Hemoglobin subunit alpha	-		0.62	0.22
IPI00654755	Hemoglobin subunit beta	0.79	0.39	1.14	0.72
IPI01018810	Mutant beta globin	1.19	0.8	0.64	0.16
IPI00335168	Isoform Non muscle of Myosin light polypeptide 6	-		0.21	0.01
IPI00019502	Isoform 1 of Myosin 9	1.64	0.99	1.89	0.99
IPI00397526	Isoform 1 of Myosin 10	1.43	0.66	-	
IPI00479307	Isoform 2 of Myosin 10	1.14	0.59	-	
IPI00020501	Myosin 11	0.41	0.01	0.32	0.01
IPI00024870	myosin 11 isoform SM2A	2.38	0.99	-	
IPI00743857	myosin 11 isoform SM1B	0.39	0.99	-	
IPI00744256	myosin 11 isoform SM2B	0.43	0.01	-	
IPI00917753	SET nuclear oncogene	-		2.86	0.99
IPI00301311	Isoform 2 of Protein SET	-		3.7	0.99

Continued

IPI Accession	Protein name	Replicate 1		Replicate 2	
		Ratio(C/N)	p-value	Ratio(C/N)	p-value
IPI00479743	Isoform 1 of POTE ankyrin domain family member E	0.76	0.1	-	
IPI00739539	POTE ankyrin domain family member F	0.28	0.01	-	
IPI00740545	POTE ankyrin domain family member I	8.33	0.99	-	
IPI00738655	POTE ankyrin domain family member J	50	0.99	-	
IPI00977640	sodium potassium transporting ATPase subunit alpha 1 isoform d	1.39	0.72	-	
IPI00003021	Sodium potassium transporting ATPase subunit alpha 2	N		-	
IPI00302840	Sodium potassium transporting ATPase subunit alpha 3	C		-	
IPI00006482	Isoform Long of Sodium potassium transporting ATPase subunit alpha 1	0.84	0.43	0.71	0.11
IPI00414005	Isoform Short of Sodium potassium transporting ATPase subunit alpha 1	N		-	
IPI00790327	cDNA FLJ59513 highly similar to Sodium potassium transporting ATPase alpha 3 chain	N		-	
IPI00180675	Tubulin alpha 1A chain	-		0.46	0.02
IPI00007750	Tubulin alpha 4A chain	-		1.75	0.98
IPI00645452	Tubulin beta	-		0.99	0.43
IPI00007752	Tubulin beta 2C chain	-		0.89	0.38
IPI00387144	cDNA FLJ55956 highly similar to Tubulin alpha 6 chain	1.61	0.98		
IPI00179709	Isoform 1 of Tubulin alpha 3C D chain	-		0.53	0.03
IPI00018146	14-3-3 protein theta	C		-	
IPI00792712	39 kDa protein	-		C	
IPI00303476	ATP synthase subunit beta mitochondrial	-		0.68	0.27
IPI00941747	Calnexin	N		-	
IPI00790433	Caveolin 3	-		C	
IPI01018949	cDNA FLJ51266 highly similar to Vitronectin	C		-	
IPI01015219	cDNA FLJ52353 highly similar to 26S protease regulatory subunit 7	C		-	

Continued

IPI Accession	Protein name	Replicate 1		Replicate 2	
		Ratio(C/N)	p-value	Ratio(C/N)	p-value
IPI00000858	cDNA FLJ56180 highly similar to Negative elongation factor E	-		C	
IPI00921995	cDNA FLJ60556 highly similar to Homo sapiens suppression of tumorigenicity 7 like ST7L transcript	-		C	
IPI00010896	Chloride intracellular channel protein 1	-		C	
IPI00012011	Cofilin 1	-		C	
IPI00025874	Dolichyl diphosphooligosaccharide protein glycosyltransferase subunit 1 precursor	0.51	0.04	-	
IPI00013079	EMILIN 1	-		N	
IPI00221232	Guanine nucleotide binding protein G I G S G O subunit gamma 12	0.45	0.02	-	
IPI00186460	Isoform 1 of Collagen alpha 1 II chain	-		C	
IPI00477747	Isoform 1 of Follistatin related protein 4	-		C	
IPI00549248	Isoform 1 of Nucleophosmin	-		C	
IPI00827813	Isoform 2F of Cytoplasmic dynein 1 intermediate chain 2	N		-	
IPI00337387	Isoform 3 of Pre mRNA processing factor 40 homolog A	N		-	
IPI00179330	Ubiquitin 40S ribosomal protein S27a	N		-	
IPI00291827	Neutral alpha glucosidase C	-		C	
IPI00219773	Ornithine decarboxylase antizyme 1	N		-	
IPI00982925	Truncated beta globin	0.63	0.07	-	

*-: not detected

*N: proteins were detected in normal tissues only.

*C: proteins were detected in colon cancer only.

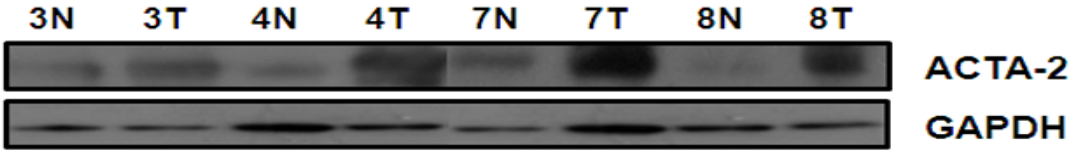
*Significant changes of protein abundances were defined: 1) selecting those proteins identified in at least two of three injections; 2) protein ratios above 1.5 and p-value> 0.95 for three experimental replicates.

Table S4. Clinical features of human tissue samples of TMA

Paired number	Gender	Age	Grade
1	Femal	56	I
2	Male	56	I
3	Male	56	II
4	Male	64	I
5	Male	66	II
6	Male	30	II
7	Male	60	II
8	Male	57	II
9	Femal	77	II
10	Male	63	III
11	Male	67	II
12	Male	42	II
13	Femal	52	II
14	Male	71	II
15	Femal	32	III
16	Male	31	II
17	Male	43	II
18	Male	47	II
19	Male	79	II

20	Male	52	II
21	Female	73	II
22	Male	38	II
23	Male	70	III
24	Male	74	II
25	Female	20	III

Suppl.Fig.1



Series	3T/3N	4T/4N	7T/7N	8T/8N
ACTA-2	6.37	19.48	1.79	12.03

Suppl. Fig.1 Validation of ACTA-2 in colon cancer by Western Blot. Cell lysates containing equal amounts of proteins from colon cancer and adjacent noncancerous tissues were loaded onto SDS-PAGE gels. The proteins were transferred onto PVDF membrane and probed with the indicated antibodies (ACTA-2 and GAPDH). Equal protein loading was evidenced by detection of GAPDH antibody. Relative protein abundance was determined using normalized densitometry data of western blotting.