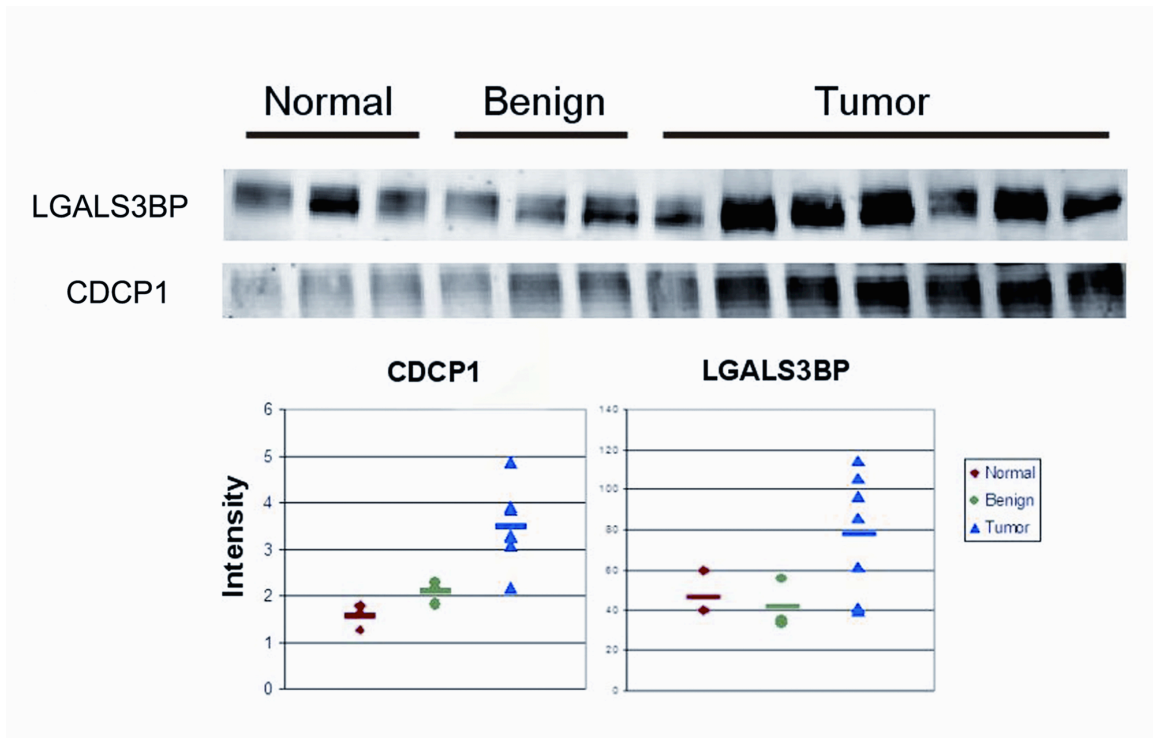


## Supplemental Materials

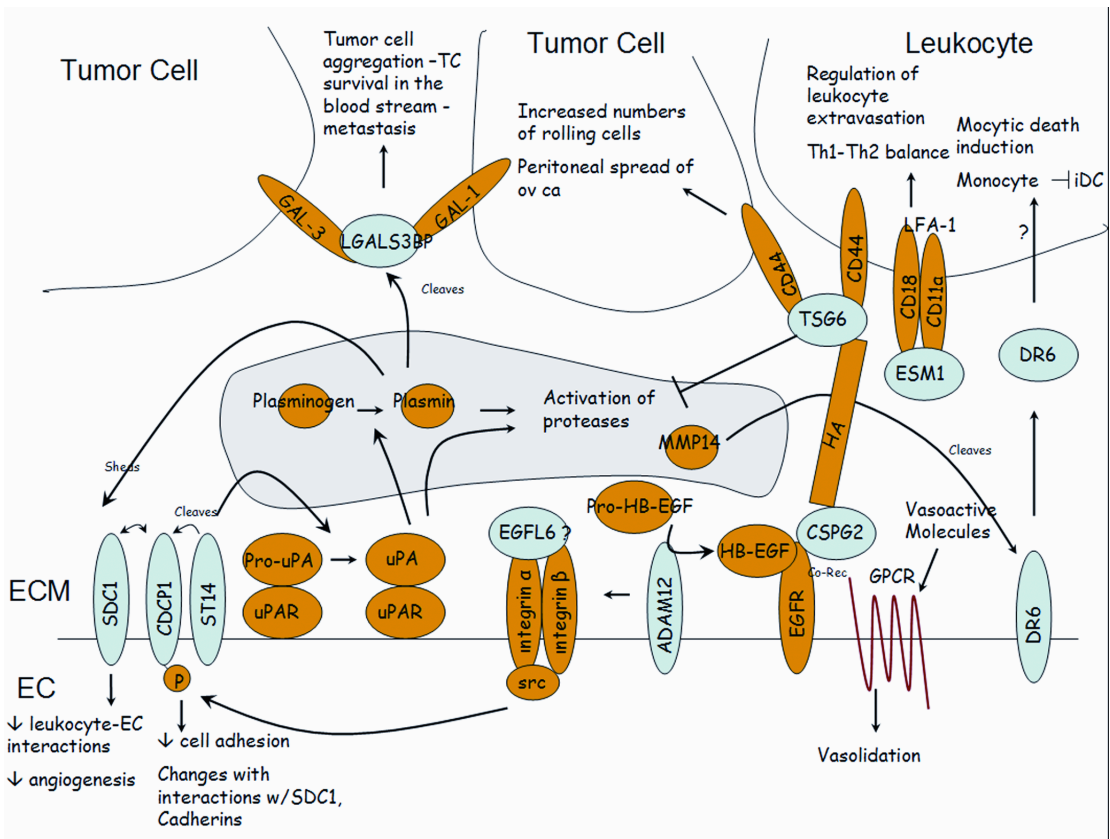
### Luminex Serum Assays

Bead-based immunoassays for TNFRSF21/DR6, ESM1/endocan and CSPG2/versican were developed towards each protein using capture antibodies coupled to COOH-coated fluorescent beads by using an amine coupling kit from BioRad (Hercules, CA) following manufacturer's protocol. 7.5  $\mu\text{g}$  of antibody were used per  $1 \times 10^6$  beads in each reaction. Luminex assays for all three proteins were performed in serum samples, each requiring a dilution prior to the assay. Serum was diluted 7.5, 10, and 20-fold in assay buffer (1% BSA, 0.1% Tween 20, PBS (pH 7.4)) to measure TNFRSF21/DR6, ESM1/endocan and CSPG2/versican, respectively. For each assay, wells of a 96-well filter plate (Millipore, Billerica, MA) were prewet with assay buffer (100  $\mu\text{L}$ ) for 5 min. Coupled beads (2500 beads/well) for each assay were added to the filter plate and washed once with 100  $\mu\text{L}$  of assay buffer. Diluted serum samples (50  $\mu\text{L}$ ) were added to each well and incubated at room temperature for 2 h followed by overnight incubation at 4°C. All incubation steps were performed with shaking at 300-400 rpm on a microplate shaker. In addition to serum samples, each plate contained a 2-fold serial dilution of purified protein standards, six control samples, and two blank wells containing only assay buffer. Following overnight incubation, plates were allowed to reach room temperature for 1 h and the wells were then washed with 100  $\mu\text{L}$  of assay buffer 3 times. Biotinylated detection antibody (25  $\mu\text{L}$ /well) was added and incubated at room temperature for 2 h. Wells were washed with 100  $\mu\text{L}$  of assay buffer 3 times and phycoerythrin-conjugated streptavidin (SAPE) (50  $\mu\text{L}$ /well) was added and incubated at room temperature for 1 h. Wells were washed as before and beads were suspended in 125  $\mu\text{L}$  of assay buffer. The level of each protein in the samples was measured by reading the beads using the BioPlex 200 Luminex instrument (BioRad) (100 beads per sample). Bead-based immunoassays for CA125 were performed using the Widescreen Human Cancer Panel 1 kit (Novagen, Gibbstown, NJ) following the manufacturer's protocol.



**Supplemental Figure S1. CDCP1-LGALS3BP in EOC patients' sera.**

TVM concentration in the serum of EOC patients. Western blot of CDCP1 and LGALS3BP protein in control normal and benign human sera and sera from ovarian cancer patients.



**Supplemental Figure S2. TVM functions.**

Molecular pathways of tumor vascular markers. Schematic representation of the known pathways where the newly identified TVMs (light blue) are involved.

	<b>Membrane</b>		<b>Secreted</b>		<b>Intracellular</b>	
	<b>Common Name</b>	<b>Affymetrix id</b>	<b>Common Name</b>	<b>Affymetrix id</b>	<b>Common Name</b>	<b>Affymetrix id</b>
1	ACTR3	213102_at	APCDD1	225016_at	ANKFY1	231308_at
2	ADAM12	213790_at	BECN1	208945_s_at	ARL10C	222442_s_at
3	AKAP8	203847_s_at	C6orf37	224973_at	C7orf3	227161_at
4	ANKRD9	227959_at	C6orf69	228299_at	CA13	231270_at
5	ARHGAP18	225171_at	C9orf113	229976_at	CARD11	223514_at
6	BCAP29	230150_at	CCL15	210390_s_at	CDKN2B	236313_at
7	BDKRB2	205870_at	COL11A1	37892_at	CDS1	205709_s_at
8	C10orf69	202444_s_at	COL15A1	203477_at	CENTA2	219358_s_at
9	C11orf5	219050_s_at	COL22A1	228873_at	CHD3	208807_s_at
10	C14orf100	223215_s_at	COL22A1	228873_at	CHP	214665_s_at
11	C14orf28	238647_at	CSPG2	221731_x_at	COL11A1	37892_at
12	C1orf10	220090_at	DEFB1	210397_at	CSTF2	238821_at
13	C2orf6	201297_s_at	DKFZp761H079	228201_at	CTSB	213275_x_at
14	C6orf55	224437_s_at	DKFZp762E1312	218726_at	CYFIP2	220999_s_at
15	CALM3	200622_x_at	ESM1	208394_x_at	DJ467N11.1	231269_at
16	CD24	209771_x_at	FJX1	219522_at	DLX6	242940_x_at
17	CDCP1	218451_at	FLJ11526	222831_at	EBF2	244885_at
18	CDH1	201131_s_at	FLJ12748	242838_at	EHF	219850_s_at
19	CDS1	226185_at	FLJ20171	225846_at	EIF2AK4	225164_s_at
20	CHODL	219867_at	FLJ22795	223327_x_at	EIF2AK4	225164_s_at
21	CKLFSF6	223047_at	FLJ22875	224779_s_at	ERBB2IP	222473_s_at
22	CLDN1	222549_at	FLJ30277	230572_at	ERP70	208658_at
23	CLST11240	219719_at	FLJ35801	228449_at	FBXO32	225345_s_at
24	CNTN6	207195_at	FLJ46072	226129_at	FKSG44	227964_at
25	CST5	207925_at	FLT1	226497_s_at	FLJ10055	230856_at
	DKFZp564I					
26	922	209596_at	GPT2	224839_s_at	FLJ20171	225846_at
27	DSG2	217901_at	HAPLN1	230895_at	FRG1	235535_x_at
28	EGFL6	219454_at	HES2	231928_at	GSR	225609_at
29	EPSTI1	227609_at	IBSP	236028_at	HEMGN	223670_s_at
30	ERBB3	226213_at	IVNS1ABP	201363_s_at	HES2	231928_at
31	F2RL1	206429_at	KIAA0930	227144_at	HIST1H2BM	208515_at
32	F3	204363_at	KIAA1892	224789_at	HOXB2	205453_at
33	FAD104	243830_at	KIAA1909	236255_at	IRS1	235392_at
34	FLJ10826	225110_at	KIAA2022	234333_at	LACTB2	222714_s_at
35	FNDC3	215910_s_at	KIBRA	213085_s_at	LARS2	34764_at
36	FOLH1	205860_x_at	LGALS3BP	200923_at	LASP1	200618_at
37	FRAP1	202288_at	LOC130355	227840_at	LZTFL1	222632_s_at

38	FZD10	219764_at	LOC132671	229331_at	LZTS1	47550_at
39	GPM6B	209170_s_at	LOC150271	228658_at	MCM4	222036_s_at
40	GPR105	206637_at	LOC158135	242545_at	MGC20410	228439_at
41	GRM1	210939_s_at	LOC158563	226273_at	MGC2408	227103_s_at
42	HIATL2	224078_at	LOC254531	239608_at	MNT	212952_at
43	IGSF4	209031_at	LOC283713	230783_at	MPHOSPH9	206205_at
44	IL10RA	204912_at	LOC284801	237670_at	NCF4	205147_x_at
45	IL28RA	244261_at	LOC286334	226590_at	NEUROG3	207965_at
46	IL7R	226218_at	LOC401022	230935_at	NID2	204114_at
47	INSR	227432_s_at	LTBP2	204682_at	OR7E47P	217499_x_at
48	KCNE3	227647_at	MGC3032	218641_at	OSBPL3	209626_s_at
49	KCNE4	222379_at	MUC3A	214676_x_at	PDE7A	232314_at
50	KCNK5	219615_s_at	NAV1	224774_s_at	PLCE1	205111_s_at
51	KIAA0703	206043_s_at	OR7E47P	217499_x_at	PNPT1	225291_at
52	KIAA1024	215081_at	PHLDB1	216102_at	PRDM1	228964_at
53	KIAA1906	236824_at	PLA2G2D	228863_at	RAPH1	225186_at
54	LOC116238	227804_at	PSAT1	223062_s_at	RGS14	204280_at
55	LOC51136	227268_at	RGC32	218723_s_at	RPS6KA1	203379_at
56	LPPR4	213496_at	RP2	205191_at	RUNX1	209360_s_at
57	MEST	202016_at	SIPA1L2	225056_at	SCO2	205241_at
58	MGC34647	237046_x_at	SIPA1L3	213600_at	SEC10L1	228418_at
59	MME	203434_s_at	SLIT2	228850_s_at	SHOC2	202777_at
60	MS4A6A	219666_at	SPP1	209875_s_at	SOX11	204915_s_at
61	MUC1	213693_s_at	STC2	203439_s_at	SPRY1	230212_at
62	MUC16	220196_at	TNFAIP6	206026_s_at	STC2	203439_s_at
63	MUC3A	214676_x_at	UBPH	224878_at	STCH	202557_at
64	OLFML2B	213125_at	WFDC2	203892_at	STXBP4	237706_at
65	OPN3	224392_s_at			TARS	201263_at
66	PCDH17	205656_at			TBX2	213417_at
67	PCDHB2	231725_at			UPP1	203234_at
68	PLXDC1	214081_at			VAR2L	226200_at
69	POLYDOM	213247_at			WASF2	224563_at
70	PREX1	224909_s_at			WASPIP	202664_at
71	SCGB2A1	205979_at			ZNF311	236551_at
72	SCNN1A	203453_at				
73	SDC1	201286_at				
74	SEC23B	210293_s_at				
75	SGPP2	226560_at				
76	SLAMF8	219386_s_at				
77	SLC11A1	210422_x_at				
78	SLC30A5	243166_at				
79	SLC30A6	243643_x_at				
80	SLC5A4	215960_at				

81	SLC9A5	220650_s_at
82	SLCO3A1	210542_s_at
83	SLIT2	228850_s_at
84	SPRY4	221489_s_at
85	SPTB	229952_at
86	ST14	216905_s_at
87	TACSTD1	201839_s_at
88	TAP1	202307_s_at
89	THY1	213869_x_at
90	TMEM19	229126_at
91	TMEM2	218113_at
92	TMEM8	222718_at
93	TNFAIP1	201208_s_at
94	TNFRSF21	218856_at
95	TOMM22	217960_s_at
96	TRIO	216700_at
97	TUBAL3	220310_at
98	WARP	222723_at

**Supplemental Table S1.**

Transmembrane and Secreted genes upregulated by the ovarian tumor endothelium.

	<b>LEFT PRIMER</b>	<b>RIGHT PRIMER</b>
ACTR3	GGATCTATGCTGGCTTCCAC	CCAAACACTGGATTGTGACG
ADAM12 LONG	TGTGACAAGTTTGGCTTTGG	GACACAGGATGGTCACCAGA
ADAM12 SHORT	GCTTTGGAGGAAGCACAGAC	AGTGTCAGTGAGGCAGTAGACG
AI057121	CATGCAACATGGGTGTTAATTC	CCCTGTTGAGCAACCTGAAG
AW517716	TGATCTTGGCTCACTGCAAC	TGGTGAAACCCCGTCTCTAC
BLAME	ATGCTGGTACTCTCTTCTCTGC	AGGGGGTCTCTGTCTCTGG
BM-009	CAACCTCCTAATAGTGTGGAAGG	CAGAATTGTTATTGCAGCATGG
BNG	CCCAGACCTCAAGTCTCTC	AGAGGCTGATGCCGTTGTAG
C11ORF8	CTTCAAAGAGTGGGCTGTGTG	GAGGCATTGATGTACGTTGTG
C6ORF55	AGCAGAAGTGCCTCACAGC	CTGGGGTTAGACGAACATCC
CD31	TTTGGCTAGTCTTGTCTTTGG	CGGTGTCTTCAGGTTGGTATTC
CDCP1 LONG	GGCTGCAGTTCCAAGTTTTG	CTCGATGGTGAGTGACATGG
CDCP1 SHORT	GGCTGCAGTTCCAAGTTTTG	TACCCAGGAAAACAACGAAGG
CMKOR1	GTCCAGTGACCAGGAGAAGC	AGGGATGTAGTGCAGGATGG
CSPG2	CAAGCATCTGTCTCACGAA	CAACGGAAAGTCATGCTCAA
DEFB1	TCCCCAGTTCCTGAAAATCC	CAAGGCCTGTGAGAAAAGTTACC
EGFL6	AGAAGACCACGAGTGAGGATG	CCACGTTCTGCTCAAAAATG
EPB41L3	ACCACCAGTACCACCACCAC	CATGGTCAATGTCTGCATCC
EPST11 LONG	CTGAACACAGAATCGCCAGA	TCCCTAGGCAGGATAGGAAGT
EPST11 SHORT	CTGAACACAGAATCGCCAGA	TTGTTTCATCTTCATCTTTTGC
ESM1	CCTGAAATTCCTTCTTCC	GGCAGCATCTCTTTCACAAC
EVA1	GTCTCTTCCAGCATTACCG	TTTTCTCTGGTTGAGCCTTTC
FJX1	ACTACCTGACGGCCAACTTC	CGCCTCATGTCCAGAAAG
FLJ13910	TTTCTCAGCAGGTTGTGTGG	TTACCAAGGTCCACTTCAATAGG
FLJ23594	ACAACCGAGTGGATCAAAATG	AGAGACCTCTGGAGCTTACGG
FLJ46072	AAGTTCCTGCTGGTGGACTG	ACCAGCTCTCCTTGGAACAC
FNDC3A	GCCAATGAAAGGTGATCCAG	TGGAATACCGGAAGGAAGAG
FZD10	CAGACTAAAACGCTGGACTGC	TCTTGGAGGTCCAAATCCAC
GPM6B	TCCTATCACCTGTTCAATTGTGG	GCAGCAATCTTCCCGACTC
GPR105	ATCAGCAACTTCCCCTGTTT	AAATGGTCTCCTTCCCATTC
GPR65	AAATCTGCACTGGGAGGTG	TCCCTTCAAACATCCTTGG
HAPLN1	AGTCAGGAACTACGGATTTTGG	GCACCGCTTCATCATAGGTC
HE4	GTGTCCTGGCCAGATGAAAT	AGGGCCAGGCAGAAACTT
HOXA9	AGGCGCCTTCTCTGAAAAC	GGGTCTGGTGTTTTGTATAGGG
KIBRA	CACCATCATCCGCTCTAAGAC	ACAAAAGGTGGCTTTTGGAC
LGALS3BP	GTACCATGAGTGTGGATGC	GTGGAAGCACTTGACTGACG
LTBP2	TGACTGTTTTGAGGGCTTCC	ATGGACACAGACACAGCAG
LZTS1	AGGGAGAAGACCAGCTTCG	AGGATCTCGCTAGCCTTGG
OLFML2B	CCAAGGATGAGCGGATTTAC	GCTGTACGGGAGCTTGTAGG
PCDH17	GGACTAATGCAAGCGAGACC	CTGGGTCTTAAACGTGGAG
PSMAL	GCTTCCAAGTTCAGCGAGAG	GGTCTGTCTGGTAACCTAATGG
SCGB2A1	ATGGGGAAATTCAAGCAGTG	CCAAACGCCTTGGGTAAAG
SCL11A1	TTTGTCTAGGCTGTCTTTGG	GGAAGATCTTGGCGTAGTCCG
SDC1	TCCTGGACAGGAAAGAGGTG	CAAGGAGTAGCTGCCTTCGT
SEC23B	GAACAGCTGCAAAATGGTCAC	AATCTCCCATTACCATGTAGCC
SLC30A6	TTGGACAAACTCATCAGAGAGG	CTCGTCGAATCTTACATGCAC
SPP1	ACATATGATGGCCGAGGTG	TGAGGTGATGTCCTCGTCTG
ST14	GGGACACACCCAGTATGGAG	GAAGCCCACGCACATCAT
TNFAIP1	CGGAGAAGAAGCAGACCAAG	GCCTCCAACAAGGAGTTGTC
TNFAIP6	CGCAACTTACAAGCAGCTAGAG	TAATGCCAGTTTTCCAAATCC

B-ACTIN

ACACAGGGGAGGTGATAGCATT

ATACATCTCAAGTTGGGGACAA

**Supplemental Table S2.**

qRT-PCR primers.