

**SUPPLEMENTAL TABLE I**

	Molecule	Vector	Sense/ Antisense	Sequence 5' 3'	Cloning sites	Template	Reference
1	CD300c FL	pCDNA3.1/V5-His TOPO	Sense	TGCTGGGAGGGAGACTACA	-	Human spleen cDNA library	-
2			Antisense	GGAGGCTCACAAAGGATT	-		
3	CD300c WT	pDisplay	Sense	CCTAGATCTACCGTGGCAGGGCCCGTGGGG	BglII	pCDNA3.1-CD300c FL	-
4			Antisense	GCCGTGACCTACTGTTCTCACCTTGGG	Sall		
5	CD300c E191V	pDisplay	Sense	CTCCTGGTCCCTCTTGGTGTCTGCCCTGCTCTG	-	pDisplay-CD300c WT	-
6			Antisense	CAGGAGCAGGGCAGCACCAAGAGGACAG	-		
7	CD300c Acyto	pDisplay	Sense	Oligo 3	BglII	pDisplay-CD300c WT	-
8			Antisense	GCCGTGACCTAAGGTCCTGTTACCCA	Sall		
9	CD300c Alg	pDisplay	Sense	CCTAGATCTCGGCCGGGACGACCA	BglII	pDisplay-CD300c WT	-
10			Antisense	Oligo 4	Sall		
11	CD300c WT CD300c E191V	pBabePuro-2×Myc	Sense	CTGGAATTACCGTGGCGGGCCCCGTG	EcoRI	pDisplay-CD300c WT	-
12			Antisense	Oligo 4	Sall		
13	CD300c Acyto	pBabePuro-2×Myc	Sense	Oligo 11	EcoRI	pDisplay-CD300c Acyto	-
14			Antisense	Oligo 8	Sall		
15	CD300c WT	pCDNA3-FLAG	Sense	CTGGAAITCGGACCCGTGGGGCCCCGTG	EcoRI	pDisplay-CD300c WT	-
16			Antisense	CTGCTCGAGCTACTGGTTCTCACCCCT	XbaI		
17	HA-CD300c (Soluble)	pEXP5-CT-TOPO	Sense	ATGGGTGGTATCCATATGATGTTCCAGAT	-	pDisplay-CD300c WT	-
18			Antisense	CGCTTAGCGGCACATTGCTAACACAGGA	-		
19	CD300b WT CD300b K158L	pCDNA3-FLAG	Sense	CTGGGATCCAAGGGCCCAGAGTCTGTG	BamHI	pDisplay-CD300b WT	(19)
20			Antisense	CTGGAAATTCTTAAGTGGCATATGCTTT	EcoRI		
21	CD300b ΔCyt	pCDNA3-FLAG	Sense	Oligo 19	BamHI	pDisplay-CD300b Δ1	(19)
22			Antisense	GCCGTGACCTACCTCTGAGACCCCTCAA	Sall (XbaI)		
23	CD300b C50G	pCDNA3-FLAG	Sense	CATTAAGTGGTGGGGCCGAGGGGTGCG	-	pCDNA3-FLAG-CD300b WT	-
24			Antisense	CGCACCCCTGGCCCCACCACTTAATG	-		
25	CD300b W103G	pCDNA3-FLAG	Sense	CGCAGATGTTACGGGTGGGATTGAAAG	-	pCDNA3-FLAG-CD300b WT	-
26			Antisense	CTTCATCCCACACCGTAAACATCTGCG	-		
27	CD300b W55,103G	pCDNA3-FLAG	Sense	CCGAGGGTGGCGGGATACTGCAAGAT	-	pCDNA3-FLAG-CD300b W103G	-
28			Antisense	ATCTGCATGTATCCCGCCGACCCCTCGG	-		
29	CD300b W55,103G-D112M	pCDNA3-FLAG	Sense	AAGAAGAGGACCTATGCTGGACTCAAGT	-	pCDNA3-FLAG-CD300b W55,103G	-
30			Antisense	ACTTGAGTCACAGCATAGTCCTCTCTT	-		
31	CD300b W55,103G-Q63S-D112M	pCDNA3-FLAG	Sense	CAAAGATCTTCAACCAAGGAGGTGCGGA	-	pCDNA3-FLAG-CD300b W55,103G-D112M	-
32			Antisense	TCCGACCCCTCTGGTTGAAATGAGGATCTG	-		
33	CD300b ΔIg	pCDNA3-FLAG pDisplay	Sense	CTGGGATCCCCAGAGGGAGCGCTTCC	BamHI (BglII)	pDisplay-CD300b WT	(19)
34			Antisense	Oligo 20	EcoRI		
35	FLAG-CD300b (Soluble)	pEXP5-CT-TOPO	Sense	ATGGGTGGGATTACAAGGACGATGACGAC	-	pCDNA3-FLAG-CD300b WT	-
36			Antisense	CGCCTAGTAGTGGTCTCTTGTGGGA	-		
37	CD300e WT	pCDNA3-FLAG	Sense	CCTGAATTCTCAGGCTGTTGTCTGT	EcoRI	pDisplay-CD300e WT	(20)
38			Antisense	GGACTCGAGCTATCTCCAGGAGAC	XbaI		
39	CD300f WT	pCDNA3-FLAG	Sense	CCTAGATCTGGCTACTCATTGCCACTCAA	BglII (BamHI)	pDisplay-CD300f WT	(18)
40			Antisense	GCCGTGACCTAAGGCCGCTGTATGGTGTCTGTATT	Sall (XbaI)		
41	CD300f WT	pBabePuro-2×Myc	Sense	GGCGAAATTGGCTACTCCATTGCCACTCAA	EcoRI	pDisplay-CD300f WT	(18)
42			Antisense	Oligo 40	Sall		
43	HA-CD300f (Soluble)	pEXP5-CT-TOPO	Sense	Oligo 17	-	pDisplay-CD300f WT	(18)
44			Antisense	CGCCTAACTGAGCTCAAGAGCTTGTG	-		
45	Rat CD300b FL	pCDNA3.1/V5-His TOPO	Sense	AAGAGGTGAGGTCAGGGAGGAAG	-	PBMC cDNA	-
46			Antisense	AGGGAAGGCTCTGCTTATC	-		
47	Rat CD300b WT	pDisplay	Sense	CCTAGATCTAAGGCCAGAATTGGTGAGG	BglII	pCDNA3.1-Rat CD300b FL	-
48			Antisense	GCCGTGACGCTAAGGAGAAATGCTTCTG	PstI		
49	CD300a FL	pCDNA3.1/V5-His TOPO	Sense	GCACCAAGAAAAGCAGAAA	-	PHA-activated PBMC cDNA library	-
50			Antisense	GGCAGGACAAAAGCCTAT	-		
51	CD300a WT	pDisplay pcDNA3-FLAG	Sense	CCTAGATCTAGCAAATGCAAGGACCGTGGCG	BglII (BamHI)	pCDNA3.1-CD300a FL	-
52			Antisense	GCCGTGACCTATGCTTCTTATCACACT	Sall (XbaI)		
53	TREM1 FL	pCDNA3.1/V5-His TOPO	Sense	GCTGGTGCACAGGAAGGATG	-	Purified human monocytes cDNA	-
54			Antisense	GGCTGGAAAGTCAGAGGACATT	-		
55	TREM1 WT	pcDNA3-FLAG	Sense	CCTAGATCTGCAACTAAATTAACTGAG	BglII	pCDNA3.1-TREM1 FL	-
56			Antisense	GCCGTGACCTAGGGTACAATGACCT	Sall		
57	FLAG-TREM1 (Soluble)	pEXP5-CT-TOPO	Sense	Oligo 35	-	pCDNA3-FLAG-TREM1 WT	-
58			Antisense	CGCCTACCTGATGATCTGTCACATT	-		

59	CD28 Full Length	pCDNA3.1/V5-His TOPO	Sense	TTCAGITCCCCCTCACACTTCGGGT	-	PBMC cDNA	-
60			Antisense	TGGCGGTATTCCTATCCAGAGC	-		-
61	CD28 WT	pcDNA3-FLAG	Sense	CCTAGATCTATTGGTGAAGCAGTCG	BglII	pCDNA3.1-CD28 FL	-
62			Antisense	GCCGTCGACTCAGGAGCGATAGGCTGC	Sall		-
63	FcεRγ	pcDNA3-FLAG	Sense	CTGGGATCCGGAGAGCCTCAGCTCGC	BamHI	pFLAG-CMV2- FcεRγ	(20)
64			Antisense	GCCGAATTCCTACTGTGGTGGTTCTC	EcoRI		-
65	siRNA FcεRγ 1	pSilencer2.1-U6Hygro	Sense	GATCGATCCAGGTCCGAAGGCATTCAAGAGATGC	-	-	-
66			Antisense	CTTCGGACCTGGATCTTTTGAAA AGCTTTCCAAGGATCCAGGTCGAAAGGCATCT CTTGAATGCCCTCGGACCTGGATCG	-	-	-
67	siRNA FcεRγ 4	pSilencer2.1-U6Hygro	Sense	GATCCACATGAGAAACCACCCAAATTCAAGAGATTG GGGGTTCTCATGTTTTTGAAA	-	-	-
68			Antisense	AGCTTTCCAAGGAAACATGAGAAACCACCCAAATCT CTTGAATTGGGGTGGTTCTCATGTG	-	-	-

**Table 1: Constructions used in this study.** Oligonucleotides used for product amplification and templates are listed. Nucleotide changes introduced in the sequence for amino acid substitution are shown in bold letters. Restriction sites used for cloning are underlined. Compatible restriction sites in the vector when used are in parenthesis.

## SUPPLEMENTAL FIGURES

**Figure 1**

A)

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aagagggtgcagagtggaaaggcaggaccATGTGGCTGTCCTGCTCTGCTGCTCAGTTCCCAGGG
M W L S P A L L L L S F P G

TGCCCTCCCATCCAAGGCCAGAAATTGGTGAGGGTCCAGAGCAGGGTCGGTGACTGTGCAATGT
C L S I Q G P E L V R G P E Q G S V T V Q C

CACTACAGCTCAAGATGGCAAACCAACAGGAAGTGGTGCTGAGGGGCACACTGGAGCAGCTTGC
H Y S S R W Q T N R K W W C R G A H W S T C

AGGATCCCTATCGAACCACAGGATCAGAGAAAGAAATGAAGAGTGGCCGGTTGTCATCAGGGAC
R I L I R T T G S E K E M K S G R L S I R D

AATCGAAAAAACAACTCGTCCAGGTTACCATGGAGATGCTTAAGCAAACAGACACGGGAACTTAC
N Q K N N S F Q V T M E M L K Q N D T D T Y

TGGTCCGGTATGAAAAATTGGAACTGACCTGGGACCAGAGTTAAAGTGAATTGTTTACAGGT
W C G I E K F G T D R G T R V K V I V Y S G

AAAGCTACCATGCGACTCTAACGGCAACTTTCTGGCCCACCGTGACAGCAGGGCAGACATGGCG
K A T M S T S K Q L S W P T V D S R A D M A

TCCTCTGACTTGCAGAAGGGACCCATTACATGCTCTGGTGTGAAAGGTGCTGTCTGCT
S S D L Q K R T H Y M L L V F V K V P V L L

ACCTTGGCTGGTGTGTCTCTGGCTGAAGCAGTCGACTCAGAAGGCTCTGAGGAAGAGTGGAGA
T L A G V V L W L K Q S T Q K V P E E E W R

CACACTCTCTGAGCAATCTAGACTCCGTACCTCTGGCTAAAGACATTCTCCTTAGaccgatggat
H T L C S N L D S V P L A K D I S P .

aagcagagcttccot

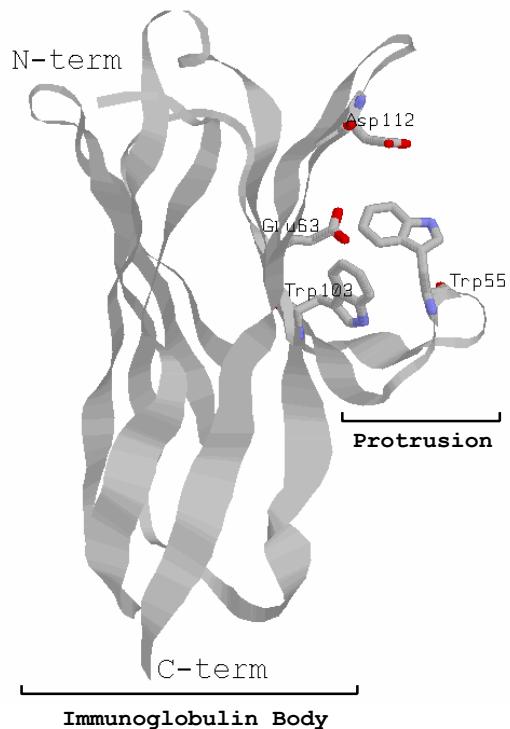
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B)

CD300b_Human	MWLP <u>P</u> ALLL <u>L</u> LS <u>G</u> E <u>S</u> I <u>Q</u> G <u>P</u> E <u>V</u> R <u>A</u> P <u>E</u> O <u>G</u> S <u>L</u> T <u>V</u> Q <u>C</u> H <u>K</u> <b>G</b> <u>E</u> T <u>V</u> I <u>K</u> WW <u>C</u> R <u>G</u> V <u>E</u> M <u>T</u> <u>C</u> R <u>I</u>
CD300b_Rat	MWLP <u>P</u> ALLL <u>L</u> SF <u>G</u> C <u>S</u> I <u>Q</u> G <u>P</u> E <u>V</u> R <u>A</u> P <u>E</u> O <u>G</u> S <u>L</u> T <u>V</u> Q <u>C</u> H <u>S</u> S <u>R</u> N <u>O</u> T <u>N</u> R <u>K</u> WW <u>C</u> R <u>G</u> A <u>P</u> M <u>T</u> <u>C</u> R <u>I</u>
CD300b_Human	L <u>E</u> I <u>R</u> G <u>S</u> E <u>Q</u> G <u>E</u> K <u>D</u> R <u>V</u> S <u>I</u> K <u>D</u> N <u>Q</u> K <u>D</u> R <u>F</u> T <u>V</u> T <u>M</u> E <u>S</u> I <u>R</u> R <u>D</u> A <u>V</u> V <u>W</u> C <u>G</u> I <u>E</u> R <u>R</u> <u>E</u> D <u>I</u> G <u>T</u> V <u>K</u> V <u>I</u>
CD300b_Rat	L <u>E</u> I <u>R</u> G <u>S</u> E <u>Q</u> G <u>E</u> K <u>D</u> R <u>V</u> S <u>I</u> K <u>D</u> N <u>Q</u> K <u>D</u> R <u>F</u> T <u>V</u> T <u>M</u> E <u>S</u> I <u>R</u> R <u>D</u> A <u>V</u> V <u>W</u> C <u>G</u> I <u>E</u> R <u>R</u> <u>E</u> D <u>I</u> G <u>T</u> V <u>K</u> V <u>I</u>
CD300b_Human	V <u>D</u> P <u>E</u> G <u>A</u> A <u>S</u> T <u>U</u> --A <u>S</u> P <u>T</u> N <u>S</u> N <u>M</u> V <u>F</u> I <u>G</u> S <u>U</u> --E <u>K</u> R <u>D</u> H <u>Y</u> M <u>L</u> L <u>V</u> F <u>V</u> K <u>V</u> E <u>I</u> L <u>I</u> I <u>V</u> T <u>A</u> I <u>L</u> W <u>L</u> K <u>S</u>
CD300b_Rat	V <u>D</u> P <u>E</u> G <u>A</u> A <u>S</u> T <u>U</u> --A <u>S</u> P <u>T</u> N <u>S</u> N <u>M</u> V <u>F</u> I <u>G</u> S <u>U</u> --E <u>K</u> R <u>D</u> H <u>Y</u> M <u>L</u> L <u>V</u> F <u>V</u> K <u>V</u> E <u>I</u> L <u>I</u> I <u>V</u> T <u>A</u> I <u>L</u> W <u>L</u> K <u>S</u>
CD300b_Human	-Q <u>R</u> V <u>P</u> E <u>E</u> P <u>G</u> E <u>Q</u> P <u>I</u> Y <u>M</u> N <u>F</u> S <u>U</u> -E <u>P</u> L <u>I</u> K <u>D</u> M <u>A</u> T
CD300b_Rat	-Q <u>R</u> V <u>P</u> E <u>E</u> P <u>G</u> E <u>Q</u> P <u>I</u> Y <u>M</u> N <u>F</u> S <u>U</u> -E <u>P</u> L <u>I</u> K <u>D</u> M <u>A</u> T

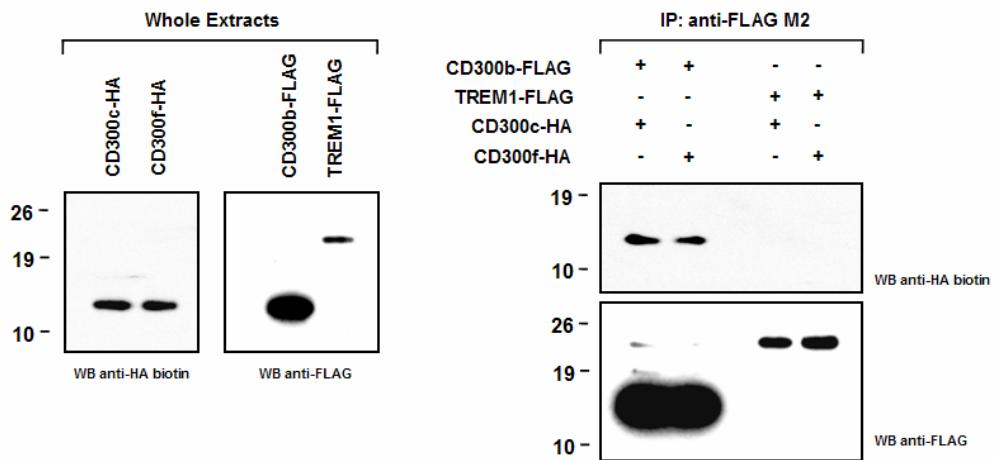
**Supplemental Figure 1. A) Nucleotide and predicted amino acid sequence of rat CD300b (GU054494).** The nucleotide sequence of rat CD300b containing an open reading frame of 627 bp is shown in upper case. The 5' and 3' untranslated regions are shown in lower case. The predicted amino acid sequence is shown below the nucleotide sequence. The signal peptide is underlined (dotted line). The Ig-like domain is marked in bold and the transmembrane domain is underlined (single line). Cysteine residues involved in the Ig-like domain fold are circled. N-glycosylation sites in the Ig-fold and the charged lysine in the transmembrane domain are boxed. **B) Sequence alignment of CD300b with its rat ortholog.** The entire molecule is represented. Identical amino acids and conservative changes are shown on black and grey backgrounds respectively.

**Figure 2**



**Supplemental Figure 2. CD300b immunoglobulin domain structure.** A structural model of CD300b Ig domain was obtained using CD300f and CLM-1 molecules as template. Strand representation. Crystallized members of CD300 family have shown that the V-set Ig fold is composed by a main immunoglobulin body and a prominent protrusion extending from it. Location and orientation of the side-chains of several amino acids in the protrusion are represented.

**Figure 3**



**Supplemental Figure 3.** *In vitro* produced tagged-receptors were tested by WB techniques (left panel). Co-immunoprecipitation of *in vitro* translated receptors was assessed as described before (right panel).