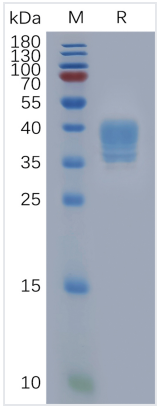
F2RL1 Human Recombinant Protein

PRODUCT OVERVIEW

Product Name	F2RL1, Recombinant Protein
Full Product Name	Human F2RL1 Protein, hFc Tag
Product Gene Name	F2RL1 recombinant protein
Product Synonym Names	GPR11; PAR2
Host	HEK293
Form/Format	Lyophilized from sterile PBS, pH7.4. Normally 5%-8% trehalose is added as protectants before lyophilization. Please see Certificate of Analysis for specific instructions.
Purity/Purification	The purity of the protein is greater than 95% as determined by SDS-PAGE and Coomassie blue staining.
Preparation and Storage	Store at -20 degree C to -80 degree C for 12 months in lyophilized form. After reconstitution, if not intended for use within a month, aliquot and store at -80 degree C (Avoid repeated freezing and thawing). Lyophilized proteins are shipped at ambient temperature.
Molecular Weight	44,126 Da
Chromosome Location	Chromosome: 5; NC_000005.9 (76114833..76131140). Location: 5q13
OMIM	600933
3D Structure	ModBase 3D Structure for P55085
Tag	C-Human Fc tag
Product Categories/Family for F2RL1 recombinant protein	Bioactive Protein
Related Product Information for F2RL1 recombinant protein	Recombinant human F2RL1 protein with C-terminal human Fc tag This gene encodes a member of the G-protein coupled receptor 1 family of proteins. The encoded cell surface receptor is activated through proteolytic cleavage of its extracellular amino terminus, resulting in a new amino terminus that acts as a tethered ligand that binds to an extracellular loop domain. Activation of the receptor has been shown to stimulate vascular smooth muscle relaxation, dilate blood vessels, increase blood flow, and lower blood pressure. This protein is also important in the inflammatory response, as well as innate and adaptive immunity. [provided by RefSeq, Jun 2016]
Other Notes	Small volumes of F2RL1 recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for F2RL1 purchase	MBS189148 is a recombinant protein targeting F2RL1. Also known as Human F2RL1 Protein, hFc Tag. Host: HEK293.



SDS-Page of F2RL1 recombinant protein

Figure 1. Human F2RL1 Protein, hFc Tag on SDS-PAGE under reducing condition.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for F2RL1. It may not necessarily be applicable to this product.

NCBI GI #	34577052
NCBI GeneID	2150
NCBI Accession #	NP_005233.3
UniProt Primary Accession #	P55085
UniProt Secondary Accession #	Q13317; Q13346; Q53XJ8
UniProt Related Accession #	P55085
GenBank Nucleotide #	NM_005242.4
NCBI Official Full Name	proteinase-activated receptor 2
NCBI Official Synonym Full Names	coagulation factor II (thrombin) receptor-like 1
NCBI Official Symbol	F2RL1
NCBI Official Synonym Symbols	PAR2; GPR11
UniProt Protein Name	Proteinase-activated receptor 2
UniProt Synonym Protein Names	Coagulation factor II receptor-like 1; G-protein coupled receptor 11; Thrombin receptor-like 1
Protein Family	Proteinase-activated receptor
UniProt Gene Name	F2RL1
UniProt Synonym Gene Names	GPR11; PAR2; PAR-2
UniProt Entry Name	PAR2_HUMAN
NCBI Protein Information	proteinase-activated receptor 2; thrombin receptor-like 1; G-protein coupled receptor 11; protease-activated receptor 2; coagulation factor II receptor-like 1
NCBI Summary for F2RL1	Coagulation factor II (thrombin) receptor-like 1 (F2RL1) is a member of the large family of 7-transmembrane-region receptors that couple to guanosine-nucleotide-binding proteins. F2RL1 is also a member of the protease-activated receptor family. It is activated by trypsin, but not by thrombin. It is activated by proteolytic cleavage of its extracellular amino terminus. The new amino terminus functions as a tethered ligand and activates the receptor. The F2RL1 gene contains two exons and is widely expressed in human tissues. The predicted protein sequence is 83% identical to the mouse receptor sequence. [provided by RefSeq, Jul 2008]

UniProt Comments for F2RL1	F2RL1: a G-protein coupled receptor for trypsin and trypsin-like enzymes. Acts as a sensor for proteolytic enzymes generated during infection. Modulates pro-inflammatory responses, and innate and adaptive immunity. It is activated by proteolytic cleavage of its extracellular amino terminus. The new amino terminus functions as a tethered ligand and activates the receptor. Activates several signaling molecules including phospholipase C (PLC), mitogen-activated protein kinase (MAPK), IKK/NFkB and Rho. Elevates intracellular calcium. Can also be transactivated by cleaved PAR1. Can signal synergistically with TLR4 and probably TLR2 in inflammatory responses and modulates TLR3 signaling. Has a protective role in establishing the endothelial barrier; the activity involves coagulation factor X. Proposed to have a bronchoprotective role in airway epithelium, but also shown to compromise the airway epithelial barrier by interrupting E-cadherin adhesion. Involved in the regulation of vascular tone; activation results in hypotension presumably mediated by vasodilation. Associates with a subset of G proteins alpha subunits such as G alpha-q, G alpha-11, G alpha-14, G alpha- 12 and G alpha-13, but probably not with G(o) alpha, G(i) subunit alpha-1 and G(i) subunit alpha-2. However, may signal through G(i) subunit alpha. Believed to be a class B receptor that internalizes as a complex with arrestin and traffic with it to endosomal vesicles, presumably as desensitized receptor, for extended periods of time. Mediates inhibition of TNF-alpha stimulated JNK phosphorylation via coupling to G alpha-q/11; the function involves dissociation of RIPK1 and TRADD from TNFR1. Involved in cellular migration. Involved in cytoskeletal rearrangement and chemotaxis through beta-arrestin-promoted scaffolds; the function is independent of G alpha-q/11 and involves promotion of cofilin dephosphoryltaion and actin filament severing. Induces redistribution of COPS5 from the plasma membrane to the cytosol and activation of the JNK cascade is mediated by COPS5. Involved in the recruitment of leukocytes to the sites of inflammation and is the major PAR receptor capable of modulating eosinophil function such as proinflammatory cytokine secretion, superoxide production and degranulation. During inflammation promotes dendritic cell maturation, trafficking to the lymph nodes and subsequent T-cell activation. Involved in antimicrobial response of innate immune cells; activation enhances phagocytosis of Gram- positive and killing of Gram-negative bacteria. Acts synergistically with interferon-gamma in enhancing antiviral responses. Implicated in a number of acute and chronic inflammatory diseases such as of the joints, lungs, brain, gastrointestinal tract, periodontium, skin, and vascular systems, and in autoimmune disorders. Widely expressed in tissues with especially high levels in pancreas, liver, kidney, small intestine, and colon. Moderate expression is detected in many organs, but none in brain or skeletal muscle. Belongs to the G-protein coupled receptor 1 family. Protein type: GPCR, family 1; Membrane protein, multi-pass; Membrane protein, integral; Receptor, GPCR Chromosomal Location of Human Ortholog: 5q13 Cellular Component: Golgi apparatus; integral to plasma membrane; early endosome; plasma membrane; pseudopodium Molecular Function: G-protein coupled receptor activity; protein binding; G-protein alpha-subunit binding; G-protein beta-subunit binding; receptor activity; thrombin receptor activity; receptor binding Biological Process: negative regulation of JNK cascade; positive regulation of positive chemotaxis; positive regulation of cytokine secretion during immune response; positive regulation of JNK cascade; positive regulation of leukocyte chemotaxis; positive regulation of vasodilation; regulation of JNK cascade; negative regulation of toll-like receptor 3 signaling pathway; T cell activation during immune response; elevation of cytosolic calcium ion concentration; positive regulation of glomerular filtration; positive regulation of superoxide release; interleukin-1 beta secretion; inflammatory response; regulation of I-kappaB kinase/NF-kappaB cascade; defense response to virus; positive regulation of toll-like receptor 3 signaling pathway; positive regulation of I-kappaB kinase/NF-kappaB cascade; neutrophil activation; positive regulation of actin filament depolymerization; positive regulation of eosinophil degranulation; positive regulation of chemotaxis; positive regulation of toll-like receptor 4 signaling pathway; positive regulation of Rho protein signal transduction; positive regulation of toll-like receptor 2 signaling pathway; positive regulation of phosphoinositide 3-kinase cascade; G-protein coupled receptor protein signaling pathway; positive regulation of pseudopodium formation; regulation of blood coagulation; innate immune response; positive regulation of transcription from RNA polymerase II promoter; blood coagulation; positive regulation of phagocytosis, engulfment; leukocyte migration; positive regulation of cell migration
Research Articles on F2RL1	**1.** The abnormal co-upregulated expression of TF and PAR-2 in eutopic and ectopic endometrium may affect the development and growth of endometriotic lesions.
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