abcam

ab26316

Anti-FPRL1/RFP antibody [GM1D6]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.2 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	GM1D6
Purification technique	Affinity purification Protein G
Specificity	Ab26316 recognises FPRL1/RFP transiently expressed on the cell surface of transfected BOSC cells.
Concentration	2 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1.2 µg for 10^6 Cells

Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

ICC/IF

Tested

Species	Human
Dilution info	1 µg/cells for 6 µg/cells
Notes	-

Target data

See full target information FPR2

Function

Pattern recognition G protein-coupled receptor (GPCR) that recognizes peptides with N-terminal formyl methionine, which are derived from invading pathogens or host mitochondria as pathogen or damage-associated molecular patterns (PAMPs and DAMPs) (PubMed:1374236, PubMed:25605714, PubMed:35217703). Preferentially recognizes longer peptides or peptides with specific sequences such as the phenol-soluble modulin (PSM) family of formylated peptide toxins produced by Staphylococcus aureus (PubMed:30098280). Ligand binding causes a conformation change that triggers signaling via G(i)/GNAI1 inhibiting adenylate cyclase activity, leading to decreased intracellular cAMP levels (PubMed:40080544). In addition, can recognize a variety of chemically distinct endogenous ligands including proteins and lipids besides formylpeptides and thereby plays multiple roles in inflammation. Acts as a receptor for the chemokine-like protein FAM19A5, mediating FAM19A5-stimulated macrophage chemotaxis and the inhibitory effect on TNFSF11/RANKL-induced osteoclast differentiation (By similarity). Acts also as a ceramide membrane receptor, and long-chain ceramides (C14 to C20) binding induces conformational changes that inhibits diet-induced adipose thermogenesis (PubMed:40080544). Participates in neuroprotection via interaction with humanin/MT-RNR2 and Amyloid-beta protein 42, product of APP (PubMed:11689470, PubMed:35365641). Differential signaling is also defined by receptor oligomerization state. Binding of ANXA1 to FPR2 homodimer elicits activation of p38 MAPKinase pathway leading to HSPB1/HSP27 phosphorylation and IL10 production in monocytes. Whereas agonistic activation of FPR1:FPR2 heterodimers signals a proapoptotic JNK pathway in neutrophils.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks

Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	FPRL1 known also as FPR2 or formyl peptide receptor-like 1 is a G-protein-coupled receptor with an approximate mass of 39 kDa. This receptor primarily resides on the surface of immune cells such as neutrophils monocytes and dendritic cells. FPRL1 plays an important role in transmitting chemotactic signals that guide immune cells towards sites of inflammation or infection. It binds ligands that include formylated peptides and lipid mediators initiating a cascade of intracellular signals that mobilize immune responses.
Biological function summary	FPRL1 enables the immune system to detect and respond to pathogenic threats effectively. As part of the immune surveillance mechanism FPRL1 aids in the migration and function of immune cells by activating intracellular second messenger systems including calcium mobilization and MAPK pathways. Though not part of a larger protein complex it interacts closely with other signaling molecules to amplify immune responses. The receptor also shows diverse ligand recognition possibly allowing it to participate in different immune processes.
Pathways	FPRL1 holds a position in both inflammatory and resolution pathways. Notably it participates in the chemokine signaling pathway working alongside other G-protein-coupled receptors to regulate leukocyte chemotaxis. FPRL1 further involves itself in the resolution of inflammation through interactions with specialized pro-resolving mediators like lipoxins. An example of this interaction occurs with the protein ALX/FPR2 with which FPRL1 shares functional similarities contributing to both swift inflammatory responses and their resolution.
Associated diseases and disorders	FPRL1 implicates itself in chronic inflammatory diseases and cancer. In chronic inflammatory conditions FPRL1 overstimulation may contribute to prolonged inflammation adversely affecting tissue function. Furthermore aberrant signaling through FPRL1 potentially influences tumor progression in various cancers. FPRL1 can interact with PD-L1 within the tumor microenvironment promoting immune evasion in cancer cells. Understanding these interactions offers potential therapeutic targets to modulate immune responses and treat associated disorders.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

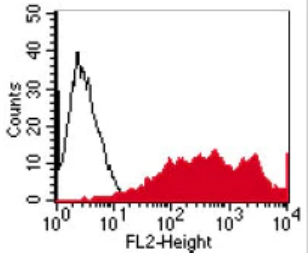
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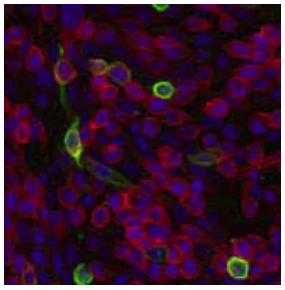
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2 product images



Flow Cytometry - Anti-FPRL1/RFP antibody [GM1D6] (ab26316)

FACS analysis of BOSC23 cells using ab26316. BOSC23 cells were transiently transfected with with an expression vector containing either FPRL1/RFP (red curve) or a control transfectant (black curve). Binding of ab26316 was detected using a PE-conjugated secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-FPRL1/RFP antibody [GM1D6] (ab26316)

ab26316 staining of FPRL1/RFP in CHO cells using 1µg/10^6 cells. CHO cells were transiently transfected with an expession vector encoding FPRL1/RFP and binding of ab26316 was visualized using a FITC-conjugated secondary antibody (green). Actin filaments are labelled with Alexa Fluor-55 Phalloidin (red). Cell nuclei are stained with DAPI (blue).

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