

ACKR2 / CCR10 / D6 Antibody (aa335-384)

Rabbit Polyclonal Antibody Catalog # ALS15736

Specification

ACKR2 / CCR10 / D6 Antibody (aa335-384) - Product Information

Application IF
Primary Accession
Reactivity Human
Host Rabbit
Clonality Polyclonal
Calculated MW 43kDa KDa

ACKR2 / CCR10 / D6 Antibody (aa335-384) - Additional Information

Gene ID 1238

Other Names

Atypical chemokine receptor 2, C-C chemokine receptor D6, Chemokine receptor CCR-10, Chemokine receptor CCR-9, Chemokine-binding protein 2, Chemokine-binding protein D6, ACKR2, CCBP2, CCR10, CMKBR9, D6

Target/Specificity

CCBP2 Antibody detects endogenous levels of total CCBP2 protein.

Reconstitution & Storage

Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles.

Precautions

ACKR2 / CCR10 / D6 Antibody (aa335-384) is for research use only and not for use in diagnostic or therapeutic procedures.

ACKR2 / CCR10 / D6 Antibody (aa335-384) - Protein Information

Name ACKR2

Synonyms CCBP2, CCR10, CMKBR9, D6

Function

Atypical chemokine receptor that controls chemokine levels and localization via high-affinity chemokine binding that is uncoupled from classic ligand-driven signal transduction cascades, resulting instead in chemokine sequestration, degradation, or transcytosis. Also known as interceptor (internalizing receptor) or chemokine-scavenging receptor or chemokine decoy receptor. Acts as a receptor for chemokines including CCL2, CCL3, CCL3L1, CCL4, CCL5, CCL7, CCL8, CCL11, CCL13, CCL17, CCL22, CCL23, CCL24, SCYA2/MCP-1, SCY3/MIP-1-alpha, SCYA5/RANTES and SCYA7/MCP-3. Upon active ligand stimulation, activates a beta- arrestin 1 (ARRB1)-dependent, G protein-independent signaling pathway that results in the phosphorylation of the actin-binding protein cofilin (CFL1) through a RAC1-PAK1-LIMK1 signaling pathway.



Activation of this pathway results in up-regulation of ACKR2 from endosomal compartment to cell membrane, increasing its efficiency in chemokine uptake and degradation. By scavenging chemokines in tissues, on the surfaces of lymphatic vessels, and in placenta, plays an essential role in the resolution (termination) of the inflammatory response and in the regulation of adaptive immune responses. Plays a major role in the immune silencing of macrophages during the resolution of inflammation. Acts as a regulator of inflammatory leukocyte interactions with lymphatic endothelial cells (LECs) and is required for immature/mature dendritic cells discrimination by LECs.

Cellular Location

Early endosome. Recycling endosome. Cell membrane; Multi-pass membrane protein. Note=Predominantly localizes to endocytic vesicles, and upon stimulation by the ligand is internalized via clathrin-coated pits. Once internalized, the ligand dissociates from the receptor, and is targeted to degradation while the receptor is recycled back to the cell membrane

Tissue Location

Found in endothelial cells lining afferent lymphatics in dermis and lymph nodes. Also found in lymph nodes subcapsular and medullary sinuses, tonsillar lymphatic sinuses and lymphatics in mucosa and submucosa of small and large intestine and appendix. Also found in some malignant vascular tumors. Expressed at high levels in Kaposi sarcoma-related pathologies. Expressed on apoptotic neutrophils (at protein level). Expressed primarily in placenta and fetal liver, and found at very low levels in the lung and lymph node.

ACKR2 / CCR10 / D6 Antibody (aa335-384) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- <u>Immunofluorescence</u>
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

ACKR2 / CCR10 / D6 Antibody (aa335-384) - Images



Immunofluorescence of COS7 cells, using CCBP2 Antibody.

ACKR2 / CCR10 / D6 Antibody (aa335-384) - Background

Atypical chemokine receptor that controls chemokine levels and localization via high-affinity chemokine binding that is uncoupled from classic ligand-driven signal transduction cascades, resulting instead in chemokine sequestration, degradation, or transcytosis. Also known as interceptor (internalizing receptor) or chemokine-scavenging receptor or chemokine decoy receptor. Acts as a receptor for chemokines including CCL2, CCL3, CCL3L1, CCL4, CCL5, CCL7, CCL8, CCL11, CCL13, CCL17, CCL22, CCL23, CCL24, SCYA2/MCP-1, SCY3/MIP-1-alpha, SCYA5/RANTES and SCYA7/MCP-3. Upon active ligand stimulation, activates a beta-arrestin 1





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(ARRB1)-dependent, G protein-independent signaling pathway that results in the phosphorylation of the actin-binding protein cofilin (CFL1) through a RAC1-PAK1- LIMK1 signaling pathway. Activation of this pathway results in up-regulation of ACKR2 from endosomal compartment to cell membrane, increasing its efficiency in chemokine uptake and degradation. By scavenging chemokines in tissues, on the surfaces of lymphatic vessels, and in placenta, plays an essential role in the resolution (termination) of the inflammatory response and in the regulation of adaptive immune responses. Plays a major role in the immune silencing of macrophages during the resolution of inflammation. Acts as a regulator of inflammatory leukocyte interactions with lymphatic endothelial cells (LECs) and is required for immature/mature dendritic cells discrimination by LECs.

ACKR2 / CCR10 / D6 Antibody (aa335-384) - References

Bonini J.A., et al. DNA Cell Biol. 16:1249-1256(1997). Nibbs R.J.B., et al.J. Biol. Chem. 272:32078-32083(1997). Kopatz S.A., et al. Submitted (MAR-2003) to the EMBL/GenBank/DDBJ databases. Kalnine N., et al. Submitted (MAY-2003) to the EMBL/GenBank/DDBJ databases. Ota T., et al. Nat. Genet. 36:40-45(2004).