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Chemokine Receptor D6 (CCBP2) Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2012a

Product Information

Application	WB, IHC-P, E
Primary Accession	O00590
Other Accession	NP_001287
Reactivity	Human, Mouse
Predicted	Bovine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB4519
Calculated MW	43443
Antigen Region	54-84

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	This Chemokine Receptor D6 (CCBP2) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 54-84 amino acids of human C-C chemokine receptor D6(CCBP2).
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Chemokine Receptor D6 (CCBP2) Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

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 (PubMed:18201974, PubMed:20373092, PubMed:23479571). Also known as interceptor (internalizing receptor) or chemokine-scavenging receptor or chemokine decoy receptor (PubMed:18201974, PubMed:20373092, PubMed:23479571). 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 (PubMed:18201974, PubMed:20373092, PubMed:23479571). 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 (PubMed:23633677). Activation of this pathway results in up-regulation of ACKR2 from endosomal compartment to cell membrane, increasing its efficiency in chemokine uptake and degradation (PubMed:23633677). 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 (PubMed:23479571). Plays a major role in the immune silencing of macrophages during the resolution of inflammation (By similarity). Acts as a regulator of inflammatory leukocyte interactions with lymphatic endothelial cells (LECs) and is required for immature/mature dendritic cells discrimination by LECs (PubMed:23479571).
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 (PubMed:18201974). Once internalized, the ligand dissociates from the receptor, and is targeted to degradation while the receptor is recycled back to the cell membrane (PubMed:18201974).
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.

Background

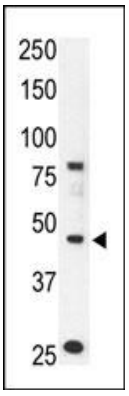
CCBP2 is a beta chemokine receptor, which is predicted to be a seven transmembrane protein similar to G protein-coupled receptors. Chemokines and their receptor-mediated signal transduction are critical for the recruitment of effector immune cells to the inflammation site. This gene is expressed in a range of tissues and hemopoietic cells. The expression of this receptor in lymphatic endothelial cells and overexpression in vascular tumors suggested its function in chemokine-driven recirculation of leukocytes and possible chemokine effects on the development and growth of vascular tumors. This receptor appears to bind the majority of beta-chemokine family members; however, its specific function remains unknown. This gene is mapped to chromosome 3p21.3, a region that includes a cluster of chemokine receptor genes.

References

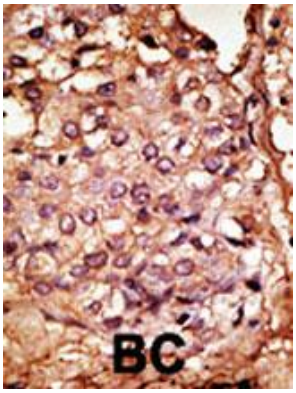
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Images



The anti-CCBP2 N-term Pab (Cat. #AP2012a) is used in Western blot to detect CCBP2 in mouse liver tissue lysate.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.