ACKR2 Protein, Human (Cell-Free, His)

Cat. No.:	HY-P700378
Synonyms:	ACKR2; atypical chemokine receptor 2; CCBP2; chemokine binding protein 2; CMKBR9; chemokine-binding protein 2; CCR9; CCR10; D6; chemokine receptor D6; chemokine receptor CCR-9; C-C chemokine receptor D6; chemokine receptor CCR-10; chemokine (C-C) receptor 9; chemokine-binding protein D6; chemokine (C-C motif) receptor 9; CC-chemokine-binding receptor JAB61; hD6; MGC126678; MGC138250;
Species:	Human
Source:	E. coli Cell-free
Accession:	O00590 (M1-A384)
Gene ID:	1238
Molecular Weight:	46.9 kDa

PROPERTIES

AA Sequence	MAATASPQPL ATEDADSENS SFYYYDYLDE VAFMLCRKDA VVSFGKVFLP VFYSLIFVLG LSGNLLLLMV LLRYVPRRRM VEIYLLNLAI SNLLFLVTLP FWGISVAWHW VFGSFLCKMV STLYTINFYS GIFFISCMSL DKYLEIVHAQ PYHRLRTRAK SLLLATIVWA VSLAVSIPDM VFVQTHENPK GVWNCHADFG GHGTIWKLFL RFQQNLLGFL LPLLAMIFFY SRIGCVLVRL RPAGQGRALK IAAALVVAFF VLWFPYNLTL FLHTLLDLQV FGNCEVSQHL DYALQVTESI AFLHCCFSPI LYAFSSHRFR QYLKAFLAAV LGWHLAPGTA QASLSSCSES SILTAQEEMT GMNDLGERQS ENYPNKEDVG NKSA
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of Tris/PBS-based buffer, 6% Trehalose, pH 8.0.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	ACKR2, an atypical chemokine receptor, orchestrates precise control over chemokine levels and localization through high-

affinity chemokine binding, operating independently of classic ligand-driven signal transduction cascades. Also referred to as an interceptor, internalizing receptor, chemokine-scavenging receptor, or chemokine decoy receptor, ACKR2 serves as a receptor for a diverse array of 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, it triggers a beta-arrestin 1 (ARRB1)-dependent, G protein-independent signaling pathway, leading to the phosphorylation of the actin-binding protein cofilin (CFL1) through a RAC1-PAK1-LIMK1 signaling cascade. Activation of this pathway facilitates the relocation of ACKR2 from endosomal compartments to the cell membrane, enhancing its efficiency in chemokine uptake and degradation. By scavenging chemokines in tissues, lymphatic vessel surfaces, and the placenta, ACKR2 plays a pivotal role in resolving the inflammatory response and regulating adaptive immune responses. Moreover, it acts as a key regulator of inflammatory leukocyte interactions with lymphatic endothelial cells (LECs) and is essential for discerning immature/mature dendritic cells by LECs. ACKR2 also contributes significantly to immune silencing of macrophages during inflammation resolution.

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