

CCR2 Protein, Mouse (N-His, C-Myc)

Cat. No.:	HY-P700541
Synonyms:	CCR2; chemokine (C-C motif) receptor 2; CMKBR2; CC CKR 2; CD192; CKR2; FLJ78302; MCP 1 R; CCR2A; CCR2B; CKR2A; CKR2B; MCP-1-R; CC-CKR-2
Species:	Mouse
Source:	E. coli
Accession:	P51683 (M1-A55)
Gene ID:	12772
Molecular Weight:	13.6 kDa

PROPERTIES

AA Sequence	M E D N N M L P Q F I H G I L S T S H S L F T R S I Q E L D E G A T T P Y D Y D D G E P C H K T S V K Q I G A
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.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
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	CCR2, a pivotal protein, serves as a key functional receptor for chemokines such as CCL2, CCL7, and CCL12. Its engagement with CCL2 on monocytes and macrophages orchestrates chemotaxis and migration induction through the activation of the PI3K cascade, involving the small G protein Rac and lamellipodium protrusion. Beyond its role in chemokine signaling, CCR2 acts as a receptor for the beta-defensin DEFB106A/DEFB106B. This versatile receptor plays a crucial role in regulating T-cell inflammatory cytokines and T-cell differentiation, promoting the generation of T-helper 17 cells (Th17) during inflammation. Additionally, CCR2 is implicated in facilitating the export of mature thymocytes, enhancing directional movement in response to sphingosine-1-phosphate stimulation, and up-regulating S1P1R expression through JAK-STAT signaling. Moreover, CCR2's involvement in neuropathic pain, synaptic transmission modulation, and the recruitment of macrophages and monocytes to injury sites underscores its multifaceted impact in diverse physiological contexts. Interactions with proteins like ARRB1 and DEFB106A/DEFB106B further contribute to the intricate regulatory network orchestrated by CCR2.
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Caution: Product has not been fully validated for medical applications. For research use only.

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