

ACKR3 Protein, Human (His-SUMO)

Cat. No.:	HY-P700537
Synonyms:	RDC1; CXCR7; RDC-1; CMKOR1; CXC-R7; CXCR-7; GPR159;
Species:	Human
Source:	E. coli
Accession:	P25106 (M1-K40)
Gene ID:	57007
Molecular Weight:	20.5 kDa

PROPERTIES

AA Sequence	M D L H L F D Y S E P G N F S D I S W P C N S S D C I V V D T V M C P N M P N K
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μ m filtered solution of Tris/PBS-based buffer, 6% Trehalose, pH 8.0.
Endotoxin Level	<1 EU/ μ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μ g/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	<p>ACKR3, an atypical chemokine receptor, exerts precise control over chemokine levels and localization through high-affinity chemokine binding, which operates independently of conventional ligand-driven signal transduction cascades. Functioning as an interceptor, internalizing receptor, chemokine-scavenging receptor, or chemokine decoy receptor, ACKR3 engages with chemokines such as CXCL11 and CXCL12/SDF1 without activating G-protein-mediated signal transduction. Instead, chemokine binding induces beta-arrestin recruitment, leading to ligand internalization and the activation of the MAPK signaling pathway. In migrating interneurons, ACKR3 is essential for regulating CXCR4 protein levels, adapting their responsiveness to chemokines. In glioma cells, ACKR3 transduces signals through the MEK/ERK pathway, conferring resistance to apoptosis and promoting cell growth and survival. While not influencing the migration, adhesion, or proliferation of normal hematopoietic progenitors, ACKR3, when activated by CXCL11 in malignant hematopoietic cells, enhances cell adhesion and migration through ERK1/2 phosphorylation. Additionally, ACKR3 plays a regulatory role in CXCR4-mediated activation of cell surface integrins and is vital for heart valve development. In the oculomotor system, ACKR3 regulates axon guidance by modulating CXCL12 levels. Furthermore, as a coreceptor with CXCR4, ACKR3 collaborates with a restricted number of HIV isolates during microbial infection.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

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