

## ACKR3 Protein, Human (Cell-Free, His, SUMO)

<b>Cat. No.:</b>	HY-P702198
<b>Synonyms:</b>	Atypical chemokine receptor 3; C-X-C chemokine receptor type 7; CXC-R7; CXCR-7; Chemokine orphan receptor 1; G-protein coupled receptor 159; G-protein coupled receptor RDC1 homolog; RDC-1
<b>Species:</b>	Human
<b>Source:</b>	E. coli Cell-free
<b>Accession:</b>	P25106 (M1-K362)
<b>Gene ID:</b>	57007
<b>Molecular Weight:</b>	57.5 kDa

### PROPERTIES

<b>AA Sequence</b>	<pre> MDLHLFDYSE   PGNFSDISWP   CNSSDCIVVD   TVMCPNMPNK SVLLYTLSFI   YIFIFVIGMI   ANSVVVVWVNI  QAKTTGYDTH CYILNLAIAAD  LWVVLTI PVW  VVSLVQHNQW  PMGELTCKVT HLIFSINLFG   SIFFLTCMSV   DRYLSITYFT   NTPSSRKKMV RRVVCILVWL   LAFCVSLPDT   YYLKTVTSAS   NNETYCRSFY PEHSIKEWLI   GMELVSVVVG   FAVPFSIIAV   FYFLARAIS ASSDQEKHSS   RKIIFS YVVV  FLVCWLPYHV   AVLLDIFSIL HYIPFTCRLE   HALFTALHVT   QCLSLVHCCV   NPVLYSFINR NYRYELMKAF   IFKYS AKTGL  TKLIDASRVS   ETEYSALEQS TK           </pre>
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.22 µm filtered solution of Tris/PBS-based buffer, 6% Trehalose, pH 8.0.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add 5-50% of glycerol (final concentration). Our default final concentration of glycerol is 50%. Customers could use it as reference.
<b>Storage &amp; Stability</b>	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.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

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## Background

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.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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