# ACKR1 Protein, Human (Cell-Free, His)

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| **Cat. No.:** | HY-P700380 |
| **Synonyms:** | ACKR1; atypical chemokine receptor 1 (Duffy blood group); DARC; Duffy blood group, chemokine receptor; Duffy blood group , FY; Duffy antigen/chemokine receptor; CCBP1; CD234; Dfy; GPD; glycoprotein D; Fy glycoprotein; Duffy blood group antigen; plasmodium vivax receptor; FY; GpFy; WBCQ1; |
| **Species:** | Human |
| **Source:** | E. coli Cell-free |
| **Accession:** | Q16570 (M1-S336) |
| **Gene ID:** | 2532 |
| **Molecular Weight:** | 41.1 kDa |

## PROPERTIES

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| **AA Sequence** | M G N C L H R A E L S P S T E N S S Q L D F E D V W N S S Y G V N D S F P D G D<br>Y G A N L E A A A P C H S C N L L D D S A L P F F I L T S V L G I L A S S T V L<br>F M L F R P L F R W Q L C P G W P V L A Q L A V G S A L F S I V V P V L A P G L<br>G S T R S S A L C S L G Y C V W Y G S A F A Q A L L L G C H A S L G H R L G A G<br>Q V P G L T L G L T V G I W G V A A L L T L P V T L A S G A S G G L C T L I Y S<br>T E L K A L Q A T H T V A C L A I F V L L P L G L F G A K G L K K A L G M G P G<br>P W M N I L W A W F I F W W P H G V V L G L D F L V R S K L L L L S T C L A Q Q<br>A L D L L L N L A E A L A I L H C V A T P L L L A L F C H Q A T R T L L P S L P<br>L P E G W S S H L D T L G S K S |
| **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

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| **Background** | ACKR3, an atypical chemokine receptor, serves as a key regulator of chemokine levels and localization through high-affinity binding to chemokines, leading to chemokine sequestration, degradation, or transcytosis. Also referred to as an interceptor, chemokine-scavenging receptor, or chemokine decoy receptor, ACKR3 functions as a receptor for chemokines such as |

CXCL11 and CXCL12/SDF1. Unlike traditional ligand-driven signal transduction, chemokine binding to ACKR3 does not activate G-protein-mediated pathways but induces beta-arrestin recruitment, resulting in ligand internalization and activation of the MAPK signaling pathway. ACKR3 plays a crucial role in regulating CXCR4 protein levels in migrating interneurons, adapting their chemokine responsiveness. In glioma cells, it transduces signals through the MEK/ERK pathway, contributing to cell growth and survival. While not involved in normal hematopoietic progenitor cell functions, ACKR3 is activated by CXCL11 in malignant hematopoietic cells, leading to ERK1/2 phosphorylation, enhanced cell adhesion, and migration. Additionally, ACKR3 acts as a coreceptor with CXCR4 for a limited subset of HIV isolates, highlighting its involvement in microbial infection.



Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA