

## CXCR4 Protein, Human (N-His-SUMO, C-Myc)

<b>Cat. No.:</b>	HY-P72159
<b>Synonyms:</b>	C-X-C chemokine receptor type 4; CD184; CD184 antigen; Chemokine C X C motif; receptor 4; Chemokine CXC Motif Receptor 4; CXC-R4; CXCR-4; CXCR4; CXCR4_HUMAN; D2S201E; FB22; Fusin; HM89; HSY3RR; LAP 3; LAP3; LCR1; LESTR; NPY3R; NPYR; NPYRL; NPY3R; NPY3R; SDF 1 receptor; SDF-1 receptor; WHIM; WHIMS
<b>Species:</b>	Human
<b>Source:</b>	E. coli
<b>Accession:</b>	P61073-2 (P303-S352)
<b>Gene ID:</b>	7852
<b>Molecular Weight:</b>	Approximately 28 kDa

### PROPERTIES

<b>AA Sequence</b>	P I L Y A F L G A K    F K T S A Q H A L T    S V S R G S S L K I    L S K G K R G G H S S V S T E S E S S S
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.2 µm solution of 20 mM Tris-HCl, 0.5 M NaCl, 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.
<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

<b>Background</b>	<p>The CXCR4 Protein serves as a receptor for the C-X-C chemokine CXCL12/SDF-1, transmitting signals that increase intracellular calcium ion levels and enhance MAPK1/MAPK3 activation. It is actively involved in the AKT signaling cascade and plays a crucial role in regulating cell migration, particularly during processes like wound healing. Additionally, CXCR4 acts as a receptor for extracellular ubiquitin, leading to elevated intracellular calcium ions and reduced cellular cAMP levels. It also binds bacterial lipopolysaccharide (LPS) and mediates LPS-induced inflammatory responses, including TNF secretion by monocytes. Beyond its immunological functions, CXCR4 plays essential roles in hematopoiesis, cardiac ventricular septum formation, vascularization of the gastrointestinal tract, and cerebellar development. In the central nervous system, it may mediate hippocampal-neuron survival. Furthermore, in the context of microbial infection, CXCR4 acts as a coreceptor, alongside CD4, for human immunodeficiency virus-1 (HIV-1) X4 isolates and serves as a primary receptor for certain HIV-2 isolates, promoting viral fusion.</p>
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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