

## Product datasheet for **TA328628**

### CXCR4 Rabbit Polyclonal Antibody

#### Product data:

|                        |   |
|------------------------|---|
| Product Type:          | Primary Antibodies  |
| Applications:          | FC, IHC, WB   |
| Recommended Dilution:  | WB: 1:200-1:2000; IHC: 1:100-1:3,000; FC: 1:50-1:600  |
| Reactivity:            | Human, Mouse, Rat   |
| Host:                  | Rabbit  |
| Clonality:             | Polyclonal  |
| Immunogen:             | Peptide (C)EGISYTSNDNYTEE,corresponding to amino acid residues 2-15 of human CXCR4. Extracellular, N-terminus.  |
| Formulation:           | Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: Phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.05% NaN <sub>3</sub> . |
| Reconstitution Method: | Add 50 ul double distilled water (DDW) to the lyophilized powder.   |
| Purification:          | Affinity purified on immobilized antigen.   |
| Conjugation:           | Unconjugated  |
| Storage:               | Store at -20°C as received.   |
| Stability:             | Stable for 12 months from date of receipt.  |
| Gene Name:             | C-X-C motif chemokine receptor 4  |
| Database Link:         | <a href="#">NP_003458</a><br><a href="#">Entrez Gene 12767 Mouse</a> <a href="#">Entrez Gene 60628 Rat</a> <a href="#">Entrez Gene 7852 Human</a><br><a href="#">P61073</a>   |



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**Background:**

Chemokines are small molecular weight, soluble secreted proteins that bind and activate their respective G-protein coupled receptor (GPCR), chemokine receptors in order to evoke a cellular response resulting in migration or chemotaxis. The chemokine system involves more than 40 chemokines and 18 chemokine receptors. The receptors are designated CXCR1-5, CCR1-11, XCR1 and CX3CR1, based on their specific ligand preference. Chemokine receptors are present on many different cell types. They were initially detected on leukocytes, where they were found to play an important role in the migration of these cells to inflammation sites. CXCR4 was originally identified as an orphan receptor, and soon gained much attention when it was discovered as a coreceptor for HIV-1. Besides from being involved in HIV-1 infection/progression, CXCR4 is found to be upregulated in many different cancers/tumors and has evolved to become a target for the development of antagonists. CXCL12 (SDF-1a) is the sole ligand for CXCR4. Following binding of its ligand, CXCR4 undergoes dimerization and activates Gi G-proteins. However downstream activation through CXCR4 could also occur through other G-proteins and non-G-proteins. The down regulation of the CXCR4 receptor is initiated by phosphorylation of its cytoplasmic tail, which is followed by the binding of arrestin. The receptor is then internalized through endocytosis and degraded in the lysosome. Downregulation of CXCR4 could also occur through the stimulation of other GPCRs. The distribution of CXCR4 is quite broad and involves the central nervous system (CNS), spleen, testes, hematopoietic and non-hematopoietic cells.

**Synonyms:**

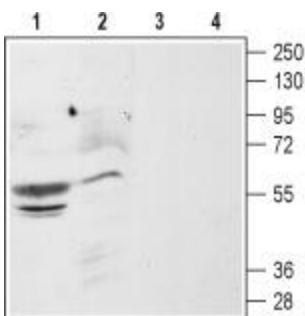
CD184; D2S201E; FB22; HM89; HSY3RR; LAP-3; LAP3; LCR1; LESTR; NPY3R; NPYR; NPYRL; NPY3R; WHIM

**Protein Families:**

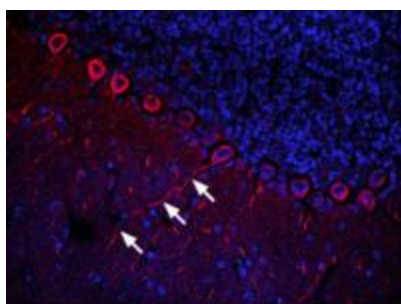
Druggable Genome, ES Cell Differentiation/IPS, GPCR, Transmembrane

**Protein Pathways:**

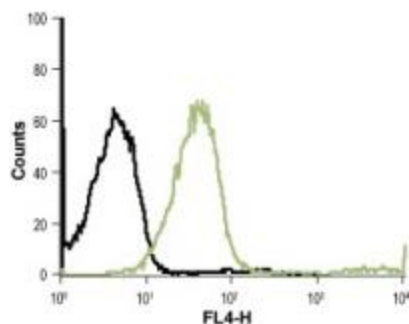
Axon guidance, Chemokine signaling pathway, Cytokine-cytokine receptor interaction, Endocytosis, Leukocyte transendothelial migration

**Product images:**


Western blot analysis of rat brain (lanes 1 and 3) and mouse brain (lanes 2 and 4) membranes: 1, 2. Anti-CXCR4 (extracellular) antibody, (1:200). 3, 4. Anti-CXCR4 (extracellular) antibody, preincubated with the control peptide antigen.



Expression of CXCR4 in the rat cerebellum. Immunohistochemical staining of rat cerebellum frozen section using Anti-CXCR4 (extracellular) antibody, (1:100). CXCR4 is expressed in Purkinje cell bodies and axonal prolongations (arrows). Hoechst 33342 is used as the counterstain.



Indirect Flow cytometry analysis of Jurkat living cells: black line, Unstained cells. green line, Cells + Anti-CXCR4 (extracellular) antibody, (10 ug/0.5x10<sup>6</sup> cells).