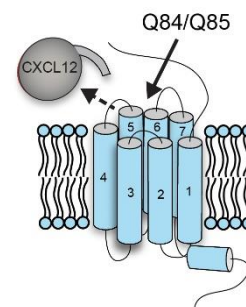


CXC chemokine receptor type 4 (CXCR4) / fusin

Catalogue no.: Q84 and Q85
Clone name: QX4-C2 and QX4-E11
Product: VHH directed against CXC chemokine receptor type 4 (CXCR4) / fusin

Target: The CXC chemokine receptor type 4 (CXCR4 / fusin, UniProtKB [P61073](#)) is a 7-transmembrane spanning class A (rhodopsin-like) G protein-coupled receptor (GPCR).¹ Binding of the chemokine CXCL12/SDF1 α activates heterotrimeric G α , promoting cytoskeleton rearrangements and migration of e.g. immune cells to sites of inflammation.² CXCR4 is important during embryonic development and regulates the homing and retention of hematopoietic stem cells in bone marrow.^{3,5} Upregulation of CXCR4 and CXCL12 contributes to the progression and metastasis of many tumor types.^{3,5} In addition, CXCR4 acts as a co-receptor for entry of HIV-1 and HIV-2 into cells.^{4,5}



Source: Recombinant monoclonal VHH (*Llama glama*), purified from *S.cerevisiae* using affinity chromatography. Immunization with CXCR4-containing nanodiscs and cells.⁵ Phage-display selection on captured CXCR4-containing lipoparticles with total elution.⁵

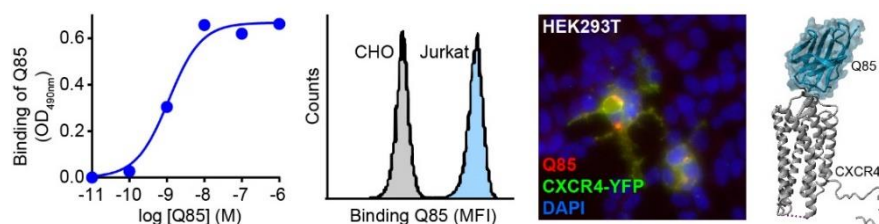
Specificity: Human CXCR4.
 Q84 and Q85 bind to the extracellular part of CXCR4 and compete for CXCL12 binding.^{5,6}

Formulation: 0.2 μ m filtered solution in PBS.

Storage: Shipped on blue ice. Store at 4°C or -20°C (aliquots). Addition of 0.02% sodiumazide is optional.

Applications: ELISA, IF, FACS

Examples:



Binding of Q85 to CXCR4 in immobilized lipoparticles in ELISA, to CXCR4 on Jurkat cells in FACS or to CXCR4-YFP in HEK293T cells in IF. Docking of a predicted model of Q85 to CXCR4 (PDB ID 3ODU).^{5,6}

Products:

| Cat. No. | Target | Tag | Label |
|-------------------|--------|----------|--|
| Q84/Q85 | CXCR4 | Tagless | No label |
| Q84c/Q85c | CXCR4 | C-direct | No label |
| Q84c-lab/Q85c-lab | CXCR4 | C-direct | Biotin / NOTA / HiLyte488 / IRDye800CW |

References:

- [Bleul et al.](#) (1996) Nature 382, 829-833
- [Gonzalo et al.](#) (2000) J Immunol 165, 499-508
- [Domanska et al.](#) (2004) Eur J Cancer 49, 219-230
- [Deng et al.](#) (1996) Nature, 381, 661-666
- [Jahnichen et al.](#) (2010) PNAS, 107, 20565-20570
- [van Hout et al.](#) (2018) Biochem Pharmacol, 158, 402-40127 Bokov et al. (under review)