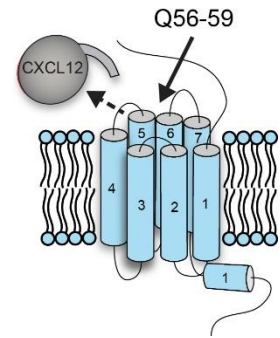


## Anti-CXC chemokine receptor type 4 (CXCR4) / fusin

**Catalogue no.:** Q56-Q59  
**Clone name:** E11, D1, D3, G2  
**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) <sup>1</sup>. Binding of the chemokine CXCL12/SDF1 $\alpha$  activates heterotrimeric G $\alpha_i$ , promoting cytoskeleton rearrangements and migration of e.g. immune cells to sites of inflammation <sup>2</sup>. CXCR4 is important during embryonic development and regulates the homing and retention of hematopoietic stem cells in bone marrow <sup>3,5</sup>. Upregulation of CXCR4 and CXCL12 contributes to the progression and metastasis of many tumor types <sup>3,5</sup>. In addition, CXCR4 acts as a co-receptor for entry of HIV-1 and HIV-2 into cells <sup>4,5</sup>.



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

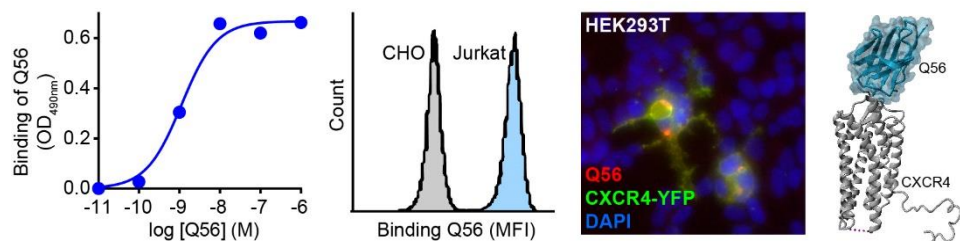
**Specificity:** Human CXCR4.  
 Q56-59 bind to the extracellular part of CXCR4 and compete for CXCL12 binding <sup>5,6</sup>.

**Formulation:** Frozen 0.2  $\mu$ m filtered solution of VHH 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 Q56 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 Q56 to CXCR4 (PDB ID 3ODU) <sup>5,6</sup>.

**Products:**

Cat. No.	Target	Tag	Label
Q56-Q59	CXCR4	Tagless	No label
Q56-Q59c	CXCR4	C-direct	No label
Q56-Q59c-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. (under review)
- Bokov et al. (under review)