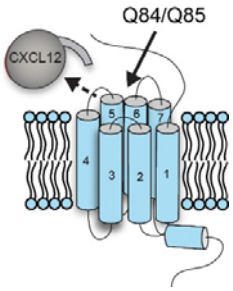
Anti-CXC chemokine receptor type 4 (CXCR4) / fusin

Catalogue no.: **Q85c**
Quantity: **250µg**

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/SDF1α activates heterotrimeric $G\alpha_i$, 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*), provided with a C-terminal C-Direct tag and purified from *S.cerevisiae* using affinity chromatography.
Immunization with CXCR4-containing nanodiscs and cells. Phage-display selection on captured CXCR4-containing lipoarticles with total elution [5].

Specificity:

Human CXCR4.
Q85 binds to the extracellular part of CXCR4 and compete for CXCL12 binding [5,6].

Formulation:

0.2 µm filtered solution in PBS.
MW: 14.4 kDa, **Ext. Coeff. (ε)$_{280nm}$:** 24535 $M^{-1}\cdot cm^{-1}$, **A_{280} at 1g/L:** 1.70

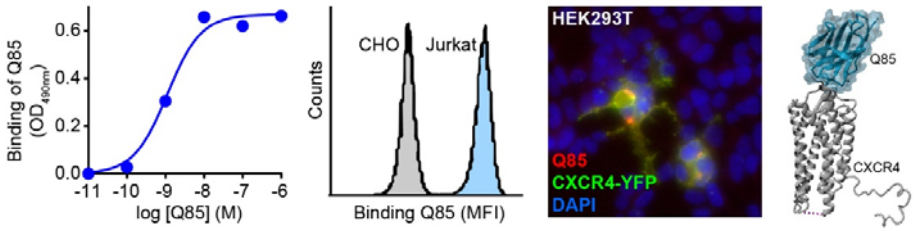
Storage:

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].

References:

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