Product Sheet

QUALITY IN ANTIBODIES

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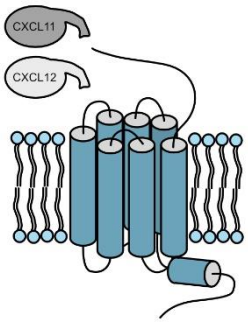
Atypical chemokine receptor 3 (ACKR3/CXCR7)

Catalogue no.: Q123c
Clone name: 2D3 / VUN701

Product: VHH directed against ACKR3/CXCR7

Target: The atypical chemokine receptor 3 (ACKR3/CXCR7, UniProtKB P25106) is a 7-transmembrane spanning class A (rhodopsin-like) G protein-coupled receptor (GPCR). Binding of the chemokines CXCL12/SDF1α and CXCL11 activates biased signaling via β-arrestin.[1] ACKR3 is expressed in several immune cells and is important for cell migration. Furthermore, it is expressed in the brain, kidneys, heart, and lungs, and plays a role during development.[2] Besides this, ACKR3 is overexpressed in multiple cancer types, including breast-, lung-, and brain cancer, where it is involved in cancer progression and metastasis occurrence.[3] ACKR3 is also involved in several autoimmune diseases and cardiovascular diseases.[4,5]



Source: Recombinant monoclonal VHH (Llama glama), purified from *e.coli* using immobilized metal ion chromatography. Immunization with ACKR3-encoding plasmid. DNA. Phage-display selection on captured ACKR3-containing lipoarticles with total elution.[6]

Specificity: Q123 binds to the extracellular part of human ACKR3 and competes for CXCL11 and CXCL12 binding.[1]

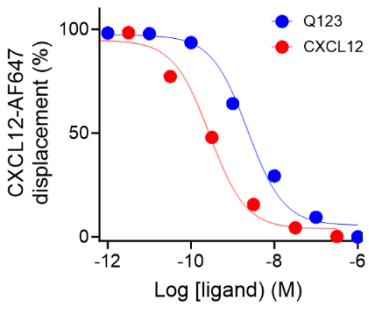
Formulation: 0.2 µm filtered solution in PBS. The products are equipped with a C-terminal FLAG-His tag.

Mol. Weight: 15445.7 kDa
Ext. Coeff. (ε): 20065 M^{-1} cm^{-1}
A_{280} at 1 g/L: 1.3

Storage: Shipped on blue ice. Store at -20˚C (aliquots). Addition of 0.02% sodium azide is optional.

Applications: ELISA, IF, antagonism

Examples:



Binding of Q123 to ACKR3, shown by displacement of CXCL12-AF647 from NanoLuc-ACKR3 in immobilized membranes.

References:

1 Kleist et al. (2022) Science 377, 222-228.
2 Quinn et al (2018) Cytokine 109, 17-23.
3 Neves et al (2019) Mol Pharmacol 96, 819-825.
4 García-Cuesta et al (2019) Front. Endocrinol 10 585.
5 Duval et al (2022) Front Endocrinol 13 906586.
6 Song et al (2021) EBioMedicine 68 103412.