

Product Sheet



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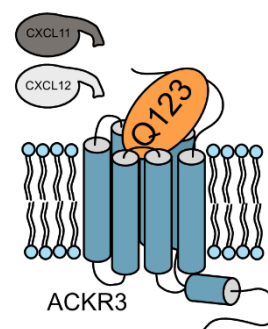
Yalelaan 1
3584 CL Utrecht
The Netherlands
+31 30 253 3421

www.qvquality.com
KvK: 30274082
VAT: 8215.17.168
NL88 RAB00153194936

Atypical chemokine receptor 3 (ACKR3/CXCR7)

Catalogue no.: Q123
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/SDF1 α 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 lipoparticles with total elution.⁶

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

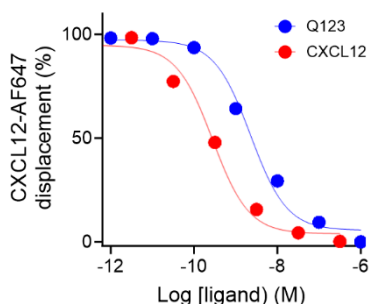
Formulation: 0.2 μ m filtered solution in PBS. The products are equipped with a C-terminal FLAG-His tag.

Mol. Weight: 15445.7 kDa
Ext. Coeff. (ϵ): 20065 M⁻¹ cm⁻¹
A₂₈₀ 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, 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.