

Product Sheet



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

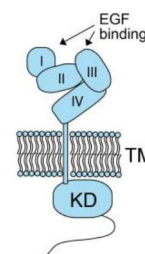
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KvK: 30274082
VAT: 8215.17.168
NL88 RABO0153194936

Epidermal Growth Factor Receptor (EGFR)

Catalogue no.: Q44c
Clone name: Q44

Product: VHH directed against EGFR

Target: The epidermal growth factor receptor (EGFR/ErbB1/HER1, UniProtKB P00533) is one of the members of a family of 4 receptor tyrosine kinases (ErbB1 to 4). EGFR is a single membrane spanning protein of which binding of its natural ligands to the extracellular N-terminal domains I and III results in activation of the intracellular kinase domain (see figure). EGFR plays an important role in cell proliferation, survival and angiogenesis and it is overexpressed on and contributes to the development of a large number of cancers. EGFR is a validated tumor marker and an important therapeutic target.¹⁻⁶



Source: Recombinant monoclonal VHH (Llama glama), purified from *S.cerevisiae* using affinity chromatography. Immunization with A431 cells. Phage-display selection on EGFR in immobilized membranes with competitive elution.^{4,5}

Specificity: Human EGFR. Epitope: Extracellular domain. Q44 (domain III, EGF-competing) and Q86 (domain I, non EGF-competing) bind to non-overlapping epitopes.^{4,5}

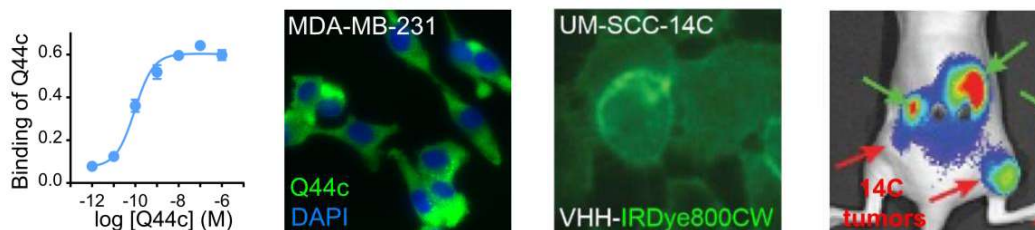
Formulation: 0.2 µm filtered solution in PBS.

Mol. Weight: 15.2 kDa
Ext. Coeff. (ε): 37025
A₂₈₀ at 1g/L: 2.4

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

Applications: ELISA, IF, antagonism, in vivo imaging

Examples:



Binding of Q44 to EGFR ectodomain by ELISA, EGFR on tumor cells by IF and detection of Q44c-IRDye800CW to EGFR in tumor xenografts in in vivo imaging.

References:

- 1 Roskoski, R., (2014) *Pharmacol Res* 79:34-74
- 2 Yarden Y., (2001) *Eur J Cancer* 37:S3-8
- 3 van Driel et al., (2014) *Int J Cancer* 134:2663-2673
- 4 Roovers et al., (2007) *Cancer Immunol Immunother* 5:303-317
- 5 Hofman et al., (2008) *J Cell Sci* 121:2519-2528
- 6 Oliveira et al., (2012) *Mol Imaging* 11:33-46