

# Product Sheet



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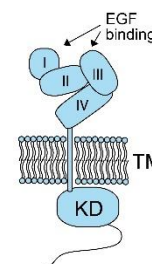
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## Epidermal Growth Factor Receptor (EGFR)

**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.<sup>1-6</sup>



**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.<sup>4,5</sup>

**Specificity:** Human EGFR. Epitope: Extracellular domain. Q44 (domain III, EGF-competing) and Q86 (domain I, non EGF-competing) bind to non-overlapping epitopes.<sup>4,5</sup>

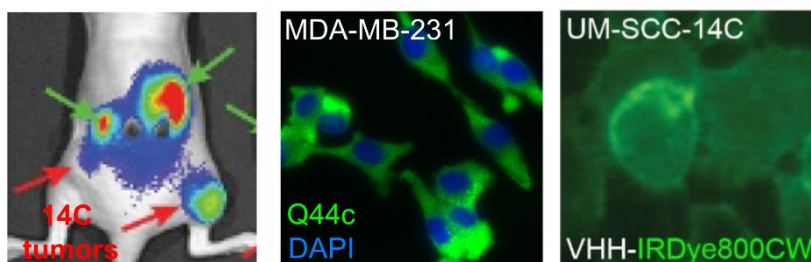
**Formulation:** 0.2 µm filtered solution in PBS. The products are equipped with a C-terminal C-Direct tag with an unpaired cysteine for directional conjugation.

**Mol. Weight:** 15.2 kDa  
**Ext. Coeff. (ε):** 37025 M<sup>-1</sup> cm<sup>-1</sup>  
**A<sub>280</sub> 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.<sup>6</sup>

### References:

- 1 Roskoski. R., (2014) Pharmacol Res 79:34-74
- 2 Yarden Y., (2001) Eur J Cancer 37:53-8
- 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