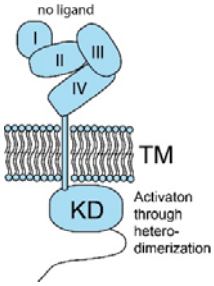
Anti-Epidermal Growth Factor Receptor 2 (HER2) / Neu

Catalogue no.: **Q17c**
Quantity: **250µg**

Product: **VHH directed against Epidermal Growth Factor Receptor 2 (ErbB2, HER2)/ Neu / CD340**

Target: The epidermal growth factor receptor 2 (ErbB2, HER2, Neu), UniProtKB P04626) is a single membrane spanning receptor tyrosine kinase that is activated by dimerization rather than ligand binding [1]. HER2 is one of the 4 ErbB family members and is regarded as a proto-oncogene. It can heterodimerize with any of the other family members and dimerization results in activation and autophosphorylation of the C-terminal tyrosine residues [2]. Overexpression of HER2 is observed in a large number of cancers and therefor serves as a target for tumor-imaging and therapy (e.g. cetuximab) [3-6].



Source: Recombinant monoclonal VHH (*Llama glama*), purified from *S.cerevisiae.* Immunization with MCF7 cells. Phage-display selection on captured HER2 ectodomain with total elution.

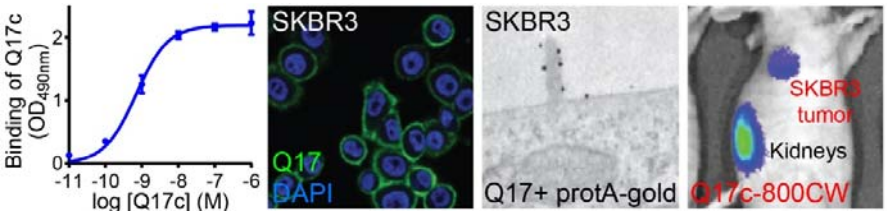
Specificity: Human ErbB2/HER2.

Formulation: 0.2 µm filtered solution in PBS.
MW: 15.0 kDa, **Ext. Coeff. (ε)$_{280nm}$:** 27055 $M^{-1}\cdot cm^{-1}$, **A_{280} at 1g/L:** 1.80

Storage: Store at 4˚C or -20˚C (aliquots).
Addition of 0.02% sodiumazide is optional.

Applications: ELISA, IF, FACS, EM, *in vivo* imaging

Examples:



Binding of Q17c to human HER2 ectodomain in ELISA or endogenous HER2 on SKBR3 cells in immunofluorescence (green) or transmission electron microscopy imaging Q17-based immuno-gold labeling. Right) In vivo imaging of SKBR3-tumors in mice using IRDye-800CW-conjugated Q17c [3-5].

References:

1 Coussens et al., (1985) Science 230, 1132-1139
2 Schlessinger. J., (2000) Cell 103, 211-225
3 Kijanka et al., (2013) Eur J Nucl Med Mol Imaging 40, 17-18-1729
4 Kijanka et al., (2016) EJNMMI Res. 6, 14, doi: 10.1186/s13550-016-0166-y
5 Kijanka et al., (2017) J Struct Biol 199, 1-11
6 Brockhoff et al., (2007) Cell Prolif 40, 488-507