



Anti-human EGFR

20161213BB



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	102-PA06
Size:	200 µg
Lot. No.:	According to product label
Country of origin:	Germany

Preparation: Produced from sera of rabbits immunized with highly pure recombinant human soluble EGFR [Leu25 – Ala647] produced in insect cells.

Target Background

Synonyms:	Epidermal growth factor receptor, Proto-oncogene c-ErbB-1
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The epidermal growth factor receptor (EGFR) subfamily of receptor tyrosine kinases comprises four members: EGFR (also known as HER1, ErbB1 or ErbB), ErbB2 (Neu, HER-2), ErbB3 (HER-3), and ErbB4 (HER-4). All family members are type I transmembrane glycoprotein that has an extracellular domain which contains two cysteine-rich domains separated by a spacer region that is involved in ligand-binding, and a cytoplasmic domain which has a membrane-proximal tyrosine kinase domain and a C-terminal tail with multiple tyrosine autophosphorylation sites. The human EGFR gene encodes a 1210 amino acid (aa) residue precursor with a 24aa putative signal peptide, a 621aa extracellular domain, a 23aa transmembrane domain, and a 542aa cytoplasmic domain. EGFR has been shown to bind a subset of the EGF family ligands, including EGF, amphiregulin, TGF- α , betacellulin, epiregulin, heparin-binding EGF and neuregulin-2 in the absence of a co-receptor. Ligand binding induces EGFR homodimerization as well as heterodimerization with ErbB2, resulting in kinase activation, tyrosine phosphorylation and cell signaling. EGFR can also be recruited to form heterodimers with the ligand-activated ErbB3 or ErbB4. EGFR signaling has been shown to regulate multiple biological functions including cell proliferation, differentiation, motility and apoptosis. In addition, EGFR signaling has also been shown to play a role in carcinogenesis.

References

1. Daly, R.J., Growth Factors, 16:255, 1999
2. Schlessinger, J., Cell. 103:211, 2000
3. Maihle, N.J. et al., Cancer Treat. Res. 107:247, 2002

Database References Antigen

Protein RefSeq:	NP_005219.2
Uniprot ID:	P00533
mRNA RefSeq:	NM_005228.3

Product Specifications

Species reactivity	human
Clone/Ab feature	Rabbit IgG
Cross reactivity	ND
Host	rabbit
Clonality	polyclonal
Purification	Protein A purified
Immunogen	Recombinant human sEGFR (RT #S01-040)
Formulation	lyophilized
Buffer	PBS

Stability: The lyophilized antibody is stable at room temperature for up to 1 month. The reconstituted antibody is stable for at least two weeks at 2-8°C. Frozen aliquots are stable for at least 6 months when stored at -20°C.

Reconstitution: Centrifuge vial prior to opening. Reconstitute in sterile water to a concentration of 0.1-1.0 mg/ml.



AVOID REPEATED FREEZE AND THAW CYCLES!

Applications

Western Blot:	Use 1-5 µg/ml
ELISA:	Functional ELISA
IF/IHC	IF: Use at 2-10 µg/ml
FACS	Use 1-5 µg/ml

NOTE: OPTIMAL DILUTIONS SHOULD BE DETERMINED BY EACH LABORATORY FOR EACH APPLICATION!



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Handling/Applications

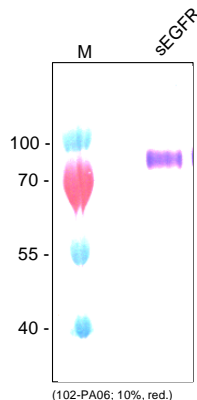


Figure 1: Western analysis of recombinant human soluble EGFR [Cat# S01-040] with a rabbit polyclonal EGFR antibody.

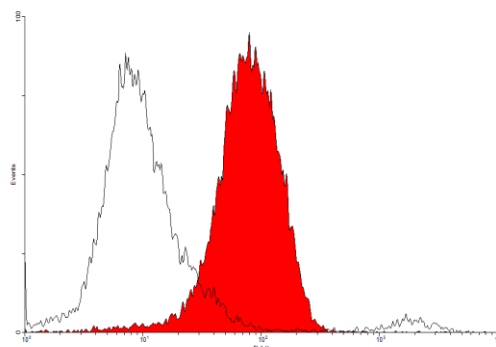


Figure 4. FACS analysis with the human epidermoid carcinoma cell line A431.

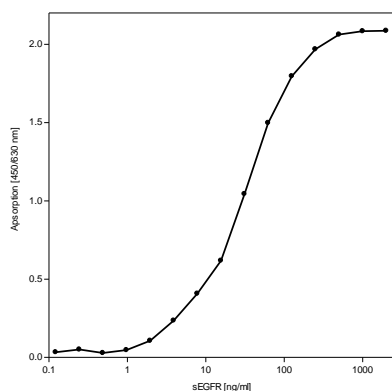


Figure 2: Binding of anti-human EGFR [Cat# 102-PA06] to recombinant human soluble EGFR [Cat# S01-040] in a functional ELISA. sEGFR was coated starting with 122 pg/ml to 2000 ng/ml (100µl/well). Detection was performed using a polyclonal rabbit anti-human EGFR (1 µg/ml, 100 µl/well) and a goat anti-rabbit Biotin conjugated secondary antibody.

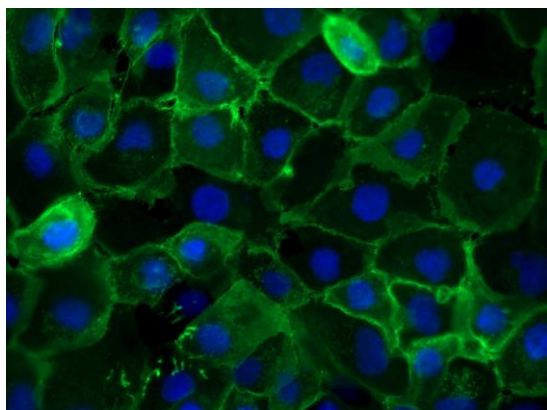


Figure 3: Immunofluorescence staining of human EGFR in the human epidermoid carcinoma cell line A431 with a polyclonal rabbit anti-human EGFR antibody [Cat# 102-PA06]. Conjugated secondary antibody: donkey anti-rabbit ALEXA Flour 488 (1:600) [Dianova].