

DA3557

Human EGFR / ERBB1 - Purified

Alternate names:

EGF Receptor, Epidermal growth factor receptor, Proto-oncogene c-ErbB-1, Receptor tyrosine-protein kinase erbB-1, c-ErbB-1, erbB-1

Quantity:

25 µg

Background:

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 24 aa putative signal peptide, a 621 aa extracellular domain, a 23 aa transmembrane domain, and a 542 aa 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.

Uniprot ID:

[P00533](#)

NCBI:

[NP_005219](#)

GenelD:

[1956](#)

Species:

Human

Source:

Insect cells

Format:

State: Lyophilized protein

Purity: ~90% by SDS-PAGE and visualized by silver stain

Buffer System: PBS, pH 7.4

Stabilizers: None

Endotoxin Level: < 0.1 ng per µg of sEGFR

Reconstitution: The lyophilized sEGFR is soluble in water and most aqueous buffers and should be restored in water or PBS to a concentration of not lower than 0.1 mg/ml.

Description:

Recombinant Human soluble EGFR, fused to a C-terminal Strep-tag, is produced as a glycosylated monomeric protein with a mass of approximately 80kDa in insect cells.

AA Sequence:

LEEKVCQGTSNKLTLGLTFEDHFLSLQRMFNCEVVLGNLEITYVQRNYDLSFLKTIQEVAGYVLIALNTV
ERIP
ENLQIIRGNMYENSALAVLSNYDANKTGLKELPMRNLQEILHGAVRFSNNPALCNVESIQWRDIVSSDFL
SNMSM

DFQNLGSCQKCDPSCPNGSCWGAGEENCQKLTKIICAQQCSGRCRGKSPSDCCHNQCAAGCTGPRESCLV
CRKFR
DEATCKDTCPLMLYNPTTYQMDVNPEGKYSFGATCVKKCPRNYVVTDHGSCVRACGADSYEMEEDGVRKCK
KCEGP
CRKVCNGIGIGEFKDSLSINATNIHKFNCTSSISGLHILPVAFRGDSFTHTPPLDPQELDILKTVKEITGF
LLIQA
WPENRTDLHAFENLEIIRGRTKQHGQFSLAVVSLNITSLGLRSLKEISDGDVVIISGNKLCYANTINWKKLF
GTSGQ
KTKIISNRGENSCKATGQVCHALCSPEGCWGPEPRDCVSCRNVSRGRECVDKCNLLEGEPRFVENSECIQC
HPECL
PQAMNITCTGRGPDNCIQAHYIDGPHCVKTCAPAGVMGENNTLVWKYADAGHVCHLCHPNCTYGCTGPGLEG
CPTNG
PKIPSWSHQPFEK

Biological Activity: Measured by its ability to bind rhEGF in a functional ELISA (BioLISA)

Molecular weight: ~ 80 kDa (629 amino acids)

Storage:

Store lyophilized at 2-8°C for 6 months or at -20°C long term.
After reconstitution store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C long term.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

General Readings:

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

Pictures:

SDS-PAGE analysis of recombinant human soluble EGFR from insect cells.
Sample was loaded in 10% SDS-polyacrylamide gel under reducing conditions and stained with Silver stain.

