

## Recombinant EGFR protein

**Catalog No:** 31165

**Lot No:** 28215004

**Expressed In:** Baculovirus

**Quantity:** 10 µg

**Concentration:** 0.468 µg/µl

**Source:** Human

**Buffer Contents:** 10 µg of Recombinant EGFR protein in 50 mM Tris-HCl, pH 8.0; 100 mM NaCl, 5 mM DTT, 15 mM reduced glutathione, 20% glycerol.

**Background:** EGFR (Epidermal Growth Factor Receptor) are receptor tyrosine kinase binding ligands of the EGF family and activating several signaling cascades to convert extracellular cues into appropriate cellular responses. Known ligands include EGF, TGFA/TGF- $\alpha$ , amphiregulin, epigen/EPGN, BTC/betacellulin, epiregulin/EREG and HBEGF/heparin-binding EGF. Ligand binding triggers receptor homo- and/or heterodimerization and autophosphorylation on key cytoplasmic residues. The phosphorylated receptor recruits adapter proteins like GRB2 which in turn activates complex downstream signaling cascades. Activates at least 4 major downstream signaling cascades including the RAS-RAF-MEK-ERK, PI3 kinase-AKT, PLCgamma-PKC and STATs modules. May also activate the NF-kappa-B signaling cascade. Also directly phosphorylates other proteins like RGS16, activating its GTPase activity and probably coupling the EGF receptor signaling to the G protein-coupled receptor signaling. Also phosphorylates MUC1 and increases its interaction with SRC and CTNNB1/beta-catenin Isoform 2 may act as an antagonist of EGF action.

**Protein Details:** Recombinant human EGFR protein was produced using baculovirus infected Sf9 cells. The protein was made against amino acids H672-A1210, accession number NM\_005228 and N-terminally fused to a GST-HIS6-Thrombin cleavage site. Purified by GSH-agarose affinity purification.

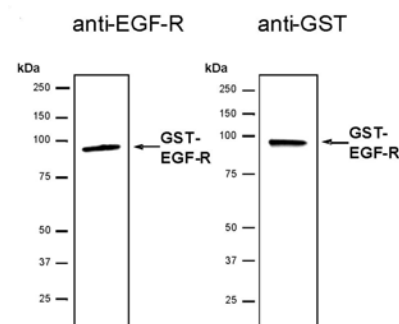
**Application Notes:** Recombinant EGFR is suitable for kinase assays and Western blot. The molecular weight of the protein is ~91.002 kDa. The activity of the protein is ~ 93 pmol/µg min.

Recommended kinase reaction conditions: 60 mM HEPES-NaOH, pH 7.5, 3 mM MgCl<sub>2</sub>, 3 mM MnCl<sub>2</sub>, 3 µM Na-orthovanadate, 1.2 mM DTT, ATP (variable), 2.5 µg/50 µl PEG20.000, Substrate: PolyEY 10 µg/50 µl, Recombinant EGFR: 40 ng/50 µl.

Kinase activity may vary depending on the substrate and reaction conditions used.

**Storage and Guarantee:** Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is guaranteed for 6 months from date of receipt.

This product is for research use only and is not for use in diagnostic procedures.



### Recombinant EGFR protein tested by SDS-PAGE gel.

0.5 µg of EGFR protein was analyzed using SDS/PAGE followed by Western blot with either an anti-EGFR or anti-GST antibody.