abcam

Product datasheet

Recombinant human EGFR (mutated C797S) protein ab208478

2 Images

Description

Product name	Recombinant human EGFR (mutated C797S) protein
Biological activity	The specific activity of ab208478 was determined to be 80 nmol/min/mg.
Purity	> 70 % Densitometry. Affinity purified.
Expression system	Baculovirus infected Sf9 cells
Accession	P00533
Protein length	Protein fragment
Animal free	No
Nature	Recombinant
Species	Human
Sequence	SGEAPNQALLRILKETEFKKIKVLGSGAFGTVYKGLWIPEG EKVKIPVAI KELREATSPKANKEILDEAYVMASVDNPHVCRLLGICLTST VQLITQLMP FGSLLDYVREHKDNIGSQYLLNWCVQIAKGMNYLEDRRLV HRDLAARNVL VKTPQHVKITDFGLAKLLGAEEKEYHAEGGKVPIKWMALE SILHRIYTHQ SDVWSYGVTVWELMTFGSKPYDGIPASEISSILEKGERLP QPPICTIDVY MIMVKCWMIDADSRPKFRELIIEFSKMARDPQRYLVIQGDE RMHLPSPTD SNFYRALMDEEDMDDVVDADEYLIPQQGFFSSPSTSRTP LLSSLSATSNN STVACIDRNGLQSCPIKEDSFLQRYSSDPTGALTEDSIDDT FLPVPEYIN QSVPKRPAGSVQNPVYHNQPLNPAPSRDPHYQDPHSTA VGNPEYLNTVQP TCVNSTFDSPAHWAQKGSHQISLDNPDYQQDFFPKEAKP NGIFKGSTAEN AEYLRVAPQSSEFIGA
Predicted molecular weight	89 kDa including tags

Amino acids	695 to 1210
Modifications	mutated C797S
Tags	GST tag N-Terminus
Additional sequence information	NM_005228.

Specifications

Our **Abpromise guarantee** covers the use of **ab208478** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	Functional Studies SDS-PAGE
Form	Liquid

Preparation and Storage

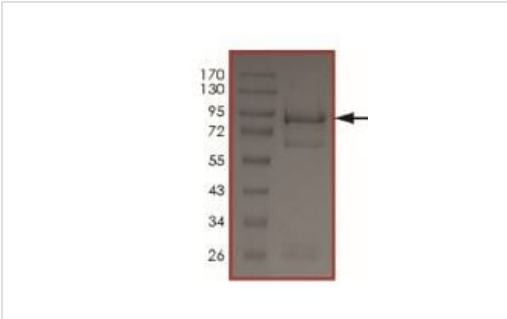
Stability and Storage	Shipped on Dry Ice. Upon delivery aliquot. Store at -80°C. Avoid freeze / thaw cycle. pH: 7.50 Constituents: 0.79% Tris HCl, 0.87% Sodium chloride, 0.31% Glutathione, 0.003% EDTA, 0.002% PMSF, 0.004% DTT, 25% Glycerol This product is an active protein and may elicit a biological response in vivo, handle with caution.

General Info

Function	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.
Tissue specificity	Ubiquitously expressed. Isoform 2 is also expressed in ovarian cancers.
Involvement in disease	Lung cancer Inflammatory skin and bowel disease, neonatal, 2
Sequence similarities	Belongs to the protein kinase superfamily. Tyr protein kinase family. EGF receptor subfamily. Contains 1 protein kinase domain.
Post-translational modifications	Phosphorylation at Ser-695 is partial and occurs only if Thr-693 is phosphorylated. Phosphorylation at Thr-678 and Thr-693 by PRKD1 inhibits EGF-induced MAPK8/JNK1 activation. Dephosphorylation by PTPRJ prevents endocytosis and stabilizes the receptor at the plasma membrane. Autophosphorylation at Tyr-1197 is stimulated by methylation at Arg-1199

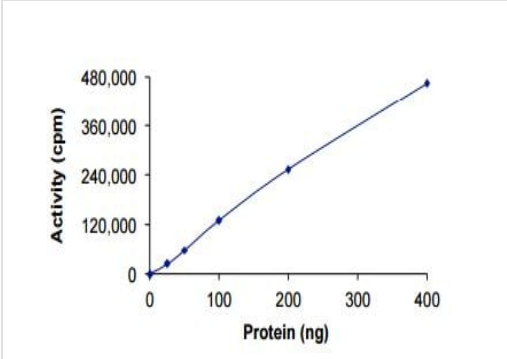
	and enhances interaction with PTPN6. Autophosphorylation at Tyr-1092 and/or Tyr-1110 recruits STAT3. Dephosphorylated by PTPN1 and PTPN2. Monoubiquitinated and polyubiquitinated upon EGF stimulation; which does not affect tyrosine kinase activity or signaling capacity but may play a role in lysosomal targeting. Polyubiquitin linkage is mainly through 'Lys-63', but linkage through 'Lys-48', 'Lys-11' and 'Lys-29' also occurs. Deubiquitination by OTUD7B prevents degradation. Ubiquitinated by RNF115 and RNF126. Methylated. Methylation at Arg-1199 by PRMT5 stimulates phosphorylation at Tyr-1197.
Cellular localization	Secreted and Cell membrane. Endoplasmic reticulum membrane. Golgi apparatus membrane. Nucleus membrane. Endosome. Endosome membrane. Nucleus. In response to EGF, translocated from the cell membrane to the nucleus via Golgi and ER. Endocytosed upon activation by ligand. Colocalized with GPER1 in the nucleus of estrogen agonist-induced cancer-associated fibroblasts (CAF).

Images



SDS-PAGE - Recombinant human EGFR (mutated C797S) protein (ab208478)

SDS-PAGE analysis of ab208478.



Functional Studies - Recombinant human EGFR (mutated C797S) protein (ab208478)

Sample Kinase Activity assay plot using ab208478, showing the specific activity to be 80 nmol/min/mg.

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