

Product datasheet

Recombinant human EGFR protein ab155639

1 References 1 Image

Overview

Product name	Recombinant human EGFR protein
Protein length	Protein fragment

Description

Nature	Recombinant
Source	HEK 293 cells
Amino Acid Sequence	
Accession	P00533
Species	Human

Sequence	<p> LEEKKVCQGTSNKLTQLGTFEDHFLSLQRMFNCEVV LGNLEITYVQRNY DLSFLKTIQEVAGYVLIANTVERIPLNLQIIRGNMYEN SYALAVLSN YDANKTGLKELPMRNLQEILHGAVRFSNNPALCNVESI QWRDIVSSDFLS NMSMDFQNHGSCQKCDPSCPNGSCWGAGEENCQ KLTKIICAQQCSGRCR GKSPSDCCHNQCAAGCTGPRESCLVCRKFRDEAT CKDTCPLMLYNPTT YQMDVNPEGKYSFGATCVKKCPRNYVVDHGSCVRA CGADSYEMEEDGVR KCKKCEGPCRKVCNGIGIGEFKDSLSINATNIKHFKNCT SISGDLHILPV AFRGDSFTHTPPLDPQELDILKTVKEITGFLLIQAWPEN RTDLHAFENLE IIRGRTKQHGGQFSLAVVSLNITSLGLRSLKEISDGDVIISG NKNLCYANT INWKKLFGTSGQKTKIISNRGENSCKATGQVCHALCSP EGCWGPEPRDCV SCRNVSRGRECVDKCNLLEGEPPREFVENSECIQCHP ECLPQAMNITCTGR GPDNCIQCAHYIDGPHCVKTCAPAGVMGENNTLVWKYA DAGHVCHLCHPNC TYGCTGPGLEGCPNGPKIPSHHHHHH </p>
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Molecular weight	70 kDa including tags
Amino acids	25 to 645
Tags	His tag C-Terminus

Specifications

Our [Abpromise guarantee](#) covers the use of **ab155639** in the following tested applications.

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

Biological activity	Measured by its binding ability in a functional ELISA. Immobilized Human EGF at 10 µg/ml can bind ab155639 with a linear range of 0.5–750 ng/ml.
Applications	Functional Studies SDS-PAGE ELISA
Endotoxin level	< 1.000 Eu/µg
Purity	>95% by SDS-PAGE . Lyophilized from 0.22 µm filtered solution
Form	Lyophilised

Preparation and Storage

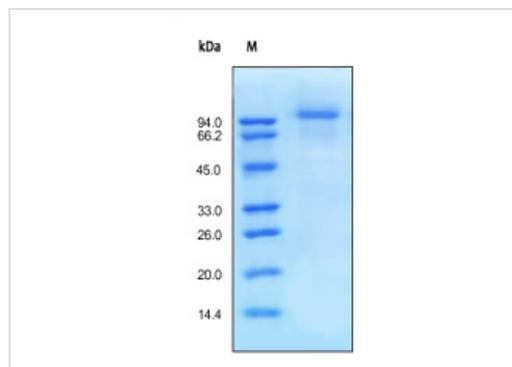
Stability and Storage	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle. pH: 7.40 Constituents: 99% PBS, 5% Trehalose This product is an active protein and may elicit a biological response in vivo, handle with caution.
Reconstitution	1 mg It is recommended to reconstitute the lyophilized protein in sterile deionized water to a final concentration of 200 µg/ml. Solubilize for 30 to 60 minutes at room temperature with occasional gentle mixing. Carrier protein (0.1% HSA or BSA) is strongly recommended for further dilution and long term storage

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.
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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 protein (ab155639)

SDS PAGE of reduced ab155639 stained overnight with Coomassie Blue. DTT-reduced Protein migrates as 110-115 kDa due to glycosylation.

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