

## Product datasheet

# Recombinant human EGFR (mutated G719S) protein ab190393

[5 Images](#)

### Description

<b>Product name</b>	Recombinant human EGFR (mutated G719S) protein
<b>Biological activity</b>	The specific activity of ab190393 was determined to be 32 nmol/min/mg.
<b>Purity</b>	> 85 % Densitometry. Affinity purified.
<b>Expression system</b>	Baculovirus infected Sf9 cells
<b>Accession</b>	<b><u>P00533</u></b>
<b>Protein length</b>	Protein fragment
<b>Animal free</b>	No
<b>Nature</b>	Recombinant
<b>Species</b>	Human
<b>Sequence</b>	<p>SGEAPN QALLRILKET EFKKIKVLSS GAFGTVYKGL            WIPEGEKVKI PVAIKELREA TSPKANKEIL DEAYVMASVD            NPHVCRLGI CLTSTVQLIT QLMFPGCLLD YVREHKDNIG            SQYLLNWCVQ IAKGMNYLED RRLVHRDLAA            RNLVKTPQH VKITDFGLAK LLGAEKEYH            AEGGKVIKW MALESILHRI YTHQSDVWSY            GVTVWELMTF GSKPYDGIPA SEISSILEKG ERLPQPPICT            IDVYMIMVKC WMIDADSRPK FRELIIEFSK MARDPQRYLV            IQGDERMHLP SPTDSNFYRA LMDEEDMDDV            VDADEYLIPQ QGFFSSPSTS RTPLLSSLSA TSNNSTVACI            DRNGLQSCPI KEDSFLQRYSDPTGALTED            SIDDTFLPVP EYINQSVPKR PAGSVQNPVY            HNQLNPAPS RDPHYQDPHS TAVGNPEYLN            TVQPTCVNST FDSPAHWAQK GSHQISLDNP            DYQQDFFPKE AKPNGIFKGS TAENAEYLRV            APQSSEFIGA</p>
<b>Predicted molecular weight</b>	89 kDa including tags
<b>Amino acids</b>	695 to 1210
<b>Modifications</b>	mutated G719S
<b>Tags</b>	proprietary tag N-Terminus

**Additional sequence information** NM\_005228.

## Specifications

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Our **Abpromise guarantee** covers the use of **ab190393** in the following tested applications.

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

<b>Applications</b>	Functional Studies SDS-PAGE
<b>Form</b>	Liquid

## Preparation and Storage

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

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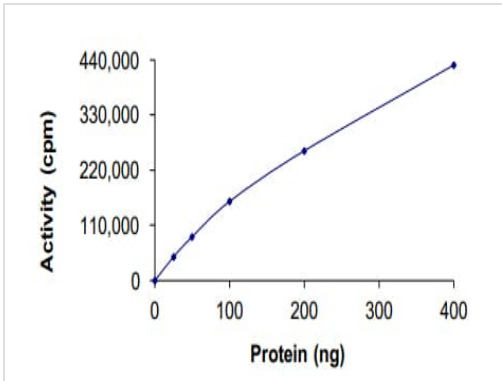
<b>Function</b>	Receptor tyrosine kinase binding ligands of the EGF family and activating several signaling cascades to convert extracellular cues into appropriate cellular responses. Known ligands include EGF, TGFA/TGF-alpha, amphiregulin, epigen/EPGN, BTC/betacellulin, epiregulin/EREG and HBEGF/heparin-binding 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.
<b>Tissue specificity</b>	Ubiquitously expressed. Isoform 2 is also expressed in ovarian cancers.
<b>Involvement in disease</b>	Lung cancer Inflammatory skin and bowel disease, neonatal, 2
<b>Sequence similarities</b>	Belongs to the protein kinase superfamily. Tyr protein kinase family. EGF receptor subfamily. Contains 1 protein kinase domain.
<b>Post-translational modifications</b>	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

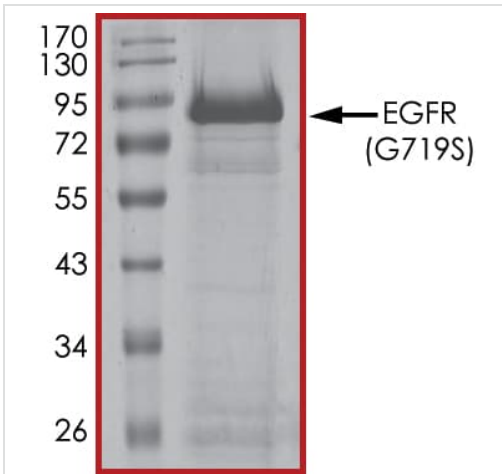
Secreted and Cell membrane. Endoplasmic reticulum membrane. Golgi apparatus membrane. Nucleus membrane. Endosome. Endosome membrane. Nucleus. In response to EGF, translocated from the cell membrane to the nucleus via Golgi and ER. Endocytosed upon activation by ligand. Colocalized with GPER1 in the nucleus of estrogen agonist-induced cancer-associated fibroblasts (CAF).

### Images



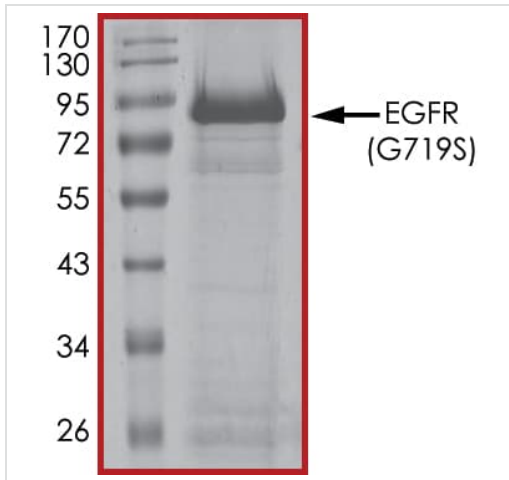
The specific activity of EGFR (ab190393) was determined to be 37 nmol/min/mg as per activity assay protocol

Functional Studies - Recombinant human EGFR (mutated G719S) protein (ab190393)



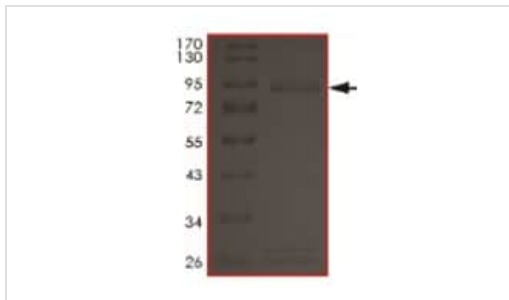
SDS PAGE analysis of ab190393

SDS-PAGE - Recombinant human EGFR (mutated G719S) protein (ab190393)



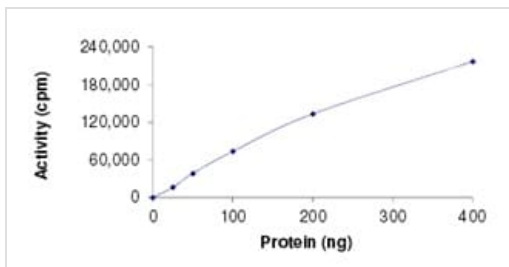
SDS PAGE analysis of ab190393

SDS-PAGE - Recombinant human EGFR (mutated G719S) protein (ab190393)



SDS Page analysis of ab190393.

SDS-PAGE - Recombinant human EGFR (mutated G719S) protein (ab190393)



Kinase Assay demonstrating the specific activity of ab190393.

Functional Studies - Recombinant human EGFR (mutated G719S) protein (ab190393)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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