

Product datasheet

Recombinant Rhesus monkey EGFR protein (His tag) ab219677

[1 Image](#)

Description

Product name	Recombinant Rhesus monkey EGFR protein (His tag)
Purity	> 95 % SDS-PAGE.
Endotoxin level	< 1.000 Eu/μg
Expression system	HEK 293 cells
Accession	P55245
Protein length	Protein fragment
Animal free	No
Nature	Recombinant
Species	Rhesus monkey
Predicted molecular weight	71 kDa including tags
Amino acids	25 to 645
Tags	His tag C-Terminus
Additional sequence information	Extracellular domain.

Specifications

Our [Abpromise guarantee](#) covers the use of **ab219677** in the following tested applications.

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

Applications	SDS-PAGE
Form	Lyophilized
Additional notes	This product is stable after storage at: -20 °C to -70 °C for 12 months in lyophilized state; -70 °C for 3 months under sterile conditions after reconstitution.

Preparation and Storage

Stability and Storage	Shipped at Room Temperature. Store at -20°C or -80°C. Avoid freeze / thaw cycle. pH: 7.40
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Constituents: 5% Trehalose, 95% PBS

Lyophilized from 0.22 µm filtered solution.

Reconstitution

Reconstitute with sterile deionized water to a concentration of 300 µg/ml.

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.

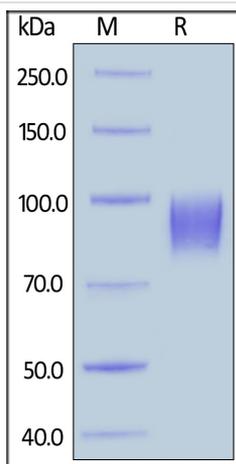
Phosphorylation at Thr-678 and Thr-693 by PRKD1 inhibits EGF-induced MAPK8/JNK1 activation. Dephosphorylation by PTPRJ prevents endocytosis and stabilizes the receptor at the plasma membrane. Autophosphorylation at Tyr-1197 is stimulated by methylation at Arg-1199 and enhances interaction with PTPN6. 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 Rhesus monkey EGFR protein (His tag) (ab219677)

DTT-reduced SDS-PAGE analysis of ab219677 stained overnight with Coomassie Blue.

DTT-reduced protein migrates as 80-100 kDa in SDS-PAGE due to glycosylation.

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

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