

Recombinant mouse EGFR protein ab167752

[4 Images](#)

Description

Product name	Recombinant mouse EGFR protein
Biological activity	Measured by its binding ability in a functional ELISA. Immobilized mouse EGF at 10 µg/ml can bind mouse EGFR with a linear range of 2.5–1000 ng/ml.
Purity	> 95 % SDS-PAGE. ab167752 is lyophilized from 0.22 µm filtered solution.
Endotoxin level	< 1.000 Eu/µg
Expression system	HEK 293 cells
Accession	<u>Q01279</u>
Protein length	Protein fragment
Animal free	No
Nature	Recombinant
Species	Mouse
Sequence	

LEEKKVCQGTSNRLTQLGTFEDHFLSLQRMYNCEVVLG
NLEITYVQRNY
DLSFLKTIQEVAGYVLIALNTVERIPLLENLQIIRGNALYENTYA
LAILSN
YGTNRTGLRELPMRNLQEILIGAVRFSNNPILCNMDTIQWR
DIVQNVFMS
NMSMDLQSHPSSCPKCDPSCPNGSCWGGGEENCQKLT
KIICAQQCShRCR
GRSPSDCCHNQCAAGCTGPRESCLVCQKFQDEATCK
DTCPLMLYNPTT
YQMDVNPEGKYSFGATCVKKCPRNYVTDHGSCVRACG
PDYYEVEEDGIR
KCKKCDGPCRKVCNGIGIGEFKDTLSINATNIKHFYCTAIS
GDLHILPV
AFKGDSFTRTPPLDPRELEILKTVKEITGFLLIQAWPDNWT
DLHAFENLE
IIRGRTKQHGGQFSLAVVGLNITSLGLRSLKEISDGDVIISGNR
NLCYANT
INWKKLFGTPNQKTKIMNNRAEKDCKAVNHVCNPLCSSE
GCWGPEPRDCV
SCQNVSRGRECVEKCNILEGEPREFVENSECIQCHPECL
PQAMNITCTGR

GPDNCIQCAHYIDGPHCVKTCYPAGIMGENNTLVWKYADAN
NVCHLCHANC TYGCAGPGLQGCEVWPSG

Predicted molecular weight	70 kDa including tags
Amino acids	25 to 642
Tags	His tag C-Terminus

Specifications

Our **Abpromise guarantee** covers the use of **ab167752** 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 ELISA
Form	Lyophilized
Additional notes	Measured by its binding ability in a functional ELISA. Immobilized mouse EGF at 10 µg/ml can bind mouse EGFR with a linear range of 2.5–1000 ng/ml.

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: 94% PBS, 5% Trehalose This product is an active protein and may elicit a biological response in vivo, handle with caution.
Reconstitution	Reconstitute with sterile deionized water to a concentration of 200 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.

Post-translational modifications

Contains 1 protein kinase domain.

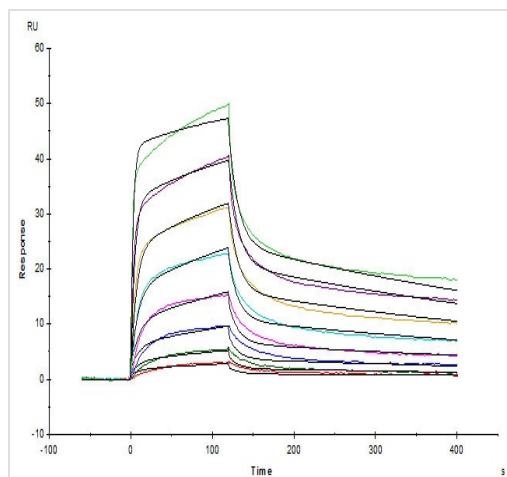
Phosphorylation at Ser-695 is partial and occurs only if Thr-693 is phosphorylated. Phosphorylation at Thr-678 and Thr-693 by PRKD1 inhibits EGF-induced MAPK8/JNK1 activation. Dephosphorylation by PTPRJ prevents endocytosis and stabilizes the receptor at the plasma membrane. Autophosphorylation at Tyr-1197 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

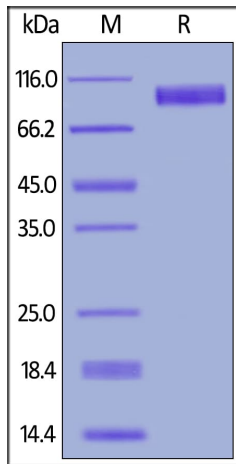
Secreted and Cell membrane. Endoplasmic reticulum membrane. Golgi apparatus membrane. Nucleus membrane. Endosome. Endosome membrane. Nucleus. In response to EGF, translocated from the cell membrane to the nucleus via Golgi and ER. Endocytosed upon activation by ligand. Colocalized with GPER1 in the nucleus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

Images



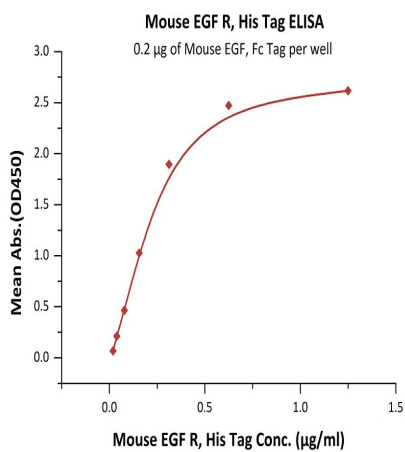
Captured Mouse EGF R, His Tag on CM5 Chip via anti-His antibody can bind Mouse EGF, Fc Tag with an affinity constant of 5.44 nM as determined in SPR assay (Biacore T200).

Functional Studies - Recombinant mouse EGFR protein (ab167752)



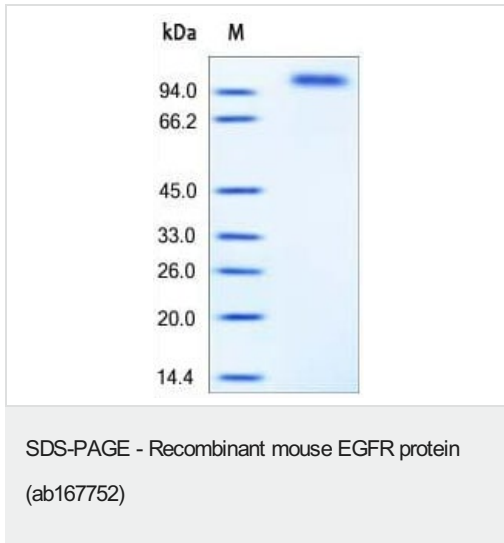
SDS-PAGE - Recombinant mouse EGFR protein (ab167752)

Mouse EGF R, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.



Functional Studies - Recombinant mouse EGFR protein (ab167752)

Immobilized Mouse EGF, Fc Tag at 2 µg/mL (100 µL/well) can bind Mouse EGF R, His Tag with a linear range of 0.02-0.313 µg/mL.



SDS-PAGE analysis of reduced ab167752 stained overnight with Coomassie Blue.

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