

EGFR/HER1

Catalog # PVGS1762

Specification

EGFR/HER1 - Product Information

Primary Accession
Species
Mouse

<u>Q01279</u>

Sequence

Leu25-Ser647

Purity

> 95% as determined by Bis-Tris PAGE
> > 95% as determined by HPLC

Endotoxin Level

Less than 1EU per µg by the LAL method.

Biological Activity

EGFR/HER1, His, Mouse (Cat.No.: Z03922) captured on CM5 Chip via anti-his antibody can bind Mouse EGF, hFc Tag in SPR assay (Biacore T200).

Expression System

HEK293

Theoretical Molecular Weight

70.40 kDa

Formulation Lyophilized from a 0.22 µm filtered solution in PBS, pH 7.4.

Reconstitution

It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH < sub > 2 < /sub > 0 more than 100 $\mu g/ml$.

Storage & Stability

Upon receiving, the product remains stable up to 6 months at -20 °C or below. Upon reconstitution, the product should be stable for 3 months at -80 °C. Avoid repeated freeze-thaw cycles.

EGFR/HER1 - Additional Information

Gene ID 13649

Other Names

Epidermal growth factor receptor, 2.7.10.1, Egfr {ECO:0000312|MGI:MGI:95294}

Target Background

The epidermal growth factor receptor is a transmembrane protein that is a receptor for members of the epidermal growth factor family of extracellular protein ligands. The epidermal growth factor



receptor is a member of the ErbB family of receptors, a subfamily of four closely related receptor tyrosine kinases: EGFR, HER2/neu, Her 3 and Her 4. Receptor tyrosine kinase binding ligands of the EGF family and activating several signaling cascades to convert extracellular cues into appropriate cellular responses.

EGFR/HER1 - Protein Information

Name Egfr {ECO:0000312|MGI:MGI:95294}

Function

Receptor tyrosine kinase binding ligands of the EGF family and activating several signaling cascades to convert extracellular cues into appropriate cellular responses (PubMed:8404850). Known ligands include EGF, TGFA/TGF-alpha, AREG, 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 (By similarity). Positively regulates cell migration via interaction with CCDC88A/GIV which retains EGFR at the cell membrane following ligand stimulation, promoting EGFR signaling which triggers cell migration (By similarity). Plays a role in enhancing learning and memory performance (PubMed: 20639532). Plays a role in mammalian pain signaling (long-lasting hypersensitivity) (PubMed:35131940).

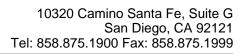
Cellular Location

Cell membrane {ECO:0000250|UniProtKB:P00533}; Single-pass type I membrane protein {ECO:0000250|UniProtKB:P00533} Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:P00533}; Single- pass type I membrane protein {ECO:0000250|UniProtKB:P00533}. Golgi apparatus membrane {ECO:0000250|UniProtKB:P00533}; Single-pass type I membrane protein {ECO:0000250|UniProtKB:P00533}. Nucleus membrane {ECO:0000250|UniProtKB:P00533}; Single-pass type I membrane protein {ECO:0000250|UniProtKB:P00533}. Endosome {ECO:0000250|UniProtKB:P00533}. Endosome membrane {ECO:0000250|UniProtKB:P00533}. Nucleus {ECO:0000250|UniProtKB:P00533}. Note=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). {ECO:0000250|UniProtKB:P00533}

EGFR/HER1 - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation





• Flow Cytomety
• Cell Culture
EGFR/HER1 - Images