

# EGFR/HER1

Catalog # PVGS1762

## Product Information

---

<b>Primary Accession Species</b>	<a href="#">Q01279</a> Mouse
<b>Sequence</b>	Leu25-Ser647
<b>Purity</b>	> 95% as determined by Bis-Tris PAGE > 95% as determined by HPLC
<b>Endotoxin Level</b>	Less than 1EU per $\mu$ g by the LAL method.
<b>Biological Activity</b>	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).
<b>Expression System</b>	HEK293
<b>Theoretical Molecular Weight</b>	70.40 kDa
<b>Formulation Reconstitution</b>	Lyophilized from a 0.22 $\mu$ m filtered solution in PBS, pH 7.4 . 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> O more than 100 $\mu$ g/ml.
<b>Storage &amp; Stability</b>	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.

## Additional Information

---

<b>Gene ID</b>	13649
<b>Other Names</b>	Epidermal growth factor receptor, 2.7.10.1, Egfr {ECO:0000312 MGI:MGI:95294}
<b>Target Background</b>	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.

## Protein Information

---

<b>Name</b>	Egfr {ECO:0000312   MGI:MGI:95294}
<b>Function</b>	<p>Receptor tyrosine kinase binding ligands of the EGF family and activating several signaling cascades to convert extracellular cues into appropriate cellular responses (PubMed:<a href="#">8404850</a>). 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:<a href="#">20639532</a>). Plays a role in mammalian pain signaling (long- lasting hypersensitivity) (PubMed:<a href="#">35131940</a>).</p>
<b>Cellular Location</b>	<p>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}</p>

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.