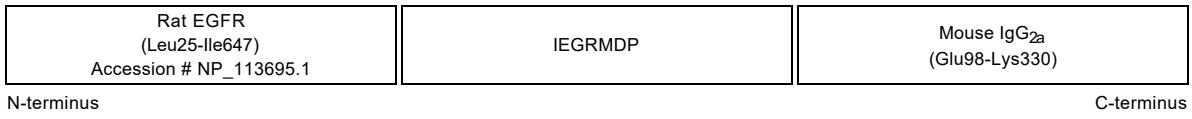
Recombinant Rat EGFR mFc Chimera

Catalog Number: 11522-ER

DESCRIPTION

Source

Mouse myeloma cell line, NS0-derived rat EGFR protein



N-terminal Sequence Analysis	Leu25
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	97 kDa

SPECIFICATIONS

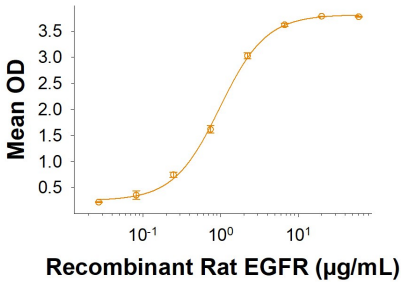
SDS-PAGE	110-130 kDa, under reducing conditions.
Activity	Measured by its binding ability in a functional ELISA. Recombinant Rat EGFR mFc Chimera binds to Recombinant Rat EGF Protein (Catalog # 3214-EG) with an ED_{50} of 0.250-2.50 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

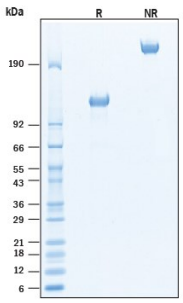
DATA

Binding Activity



Recombinant Rat EGFR mFc Chimera Protein Binding Activity. Measured by its binding ability in a functional ELISA. Recombinant Rat EGFR mFc Chimera Protein (Catalog # 11522-ER) binds to Recombinant Rat EGF Protein (Catalog # 3214-EG) with an ED_{50} of 0.250-2.50 µg/mL.

SDS-PAGE



Recombinant Rat EGFR mFc Chimera Protein SDS-PAGE. 2 µg/lane of Recombinant Rat EGFR mFc Chimera Protein (Catalog # 11522-ER) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 110 - 130 kDa and 220-260 kDa, respectively.

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Recombinant Rat EGFR mFc Chimera

Catalog Number: 11522-ER

BACKGROUND

Epidermal growth factor receptor (EGFR) is a member of a subfamily of receptor tyrosine kinases comprised of four members: EGFR (also known as HER-1, ErbB1, or ErbB), ErbB2 (Neu, HER-2), ErbB3 (HER-3), and ErbB4 (HER-4). All family members are type I transmembrane glycoproteins with an extracellular domain (ECD) containing two cysteine-rich domains separated by a spacer region and a cytoplasmic domain containing a tyrosine kinase domain followed by multiple tyrosine autophosphorylation sites (1, 2). Several soluble isoforms lacking the intracellular domain are generated by alternate splicing (3, 4). The mature ECD of rat EGFR shares 89% and 95% amino acid sequence identity with human and mouse EGFR, respectively. EGFR binds a subset of the EGF family ligands, including EGF, amphiregulin, TGF-alpha, betacellulin, epiregulin, HB-EGF, and epigen (1, 2). Ligand binding induces EGFR homodimerization as well as heterodimerization with ErbB2, resulting in kinase activation, heterodimerization tyrosine phosphorylation and cell signaling (5-7). EGFR can also be recruited to form heterodimers with the ligand-activated ErbB3 or ErbB4. EGFR signaling regulates multiple biological functions including cell proliferation, differentiation, motility, and apoptosis (5-7). EGFR is overexpressed in a wide variety of tumors and is the target of several anti-cancer drugs (8).

References:

1. Singh, A.B. and R.C. Harris (2005) Cell. Signal. **17**:1183.
2. Shilo, B.Z. (2005) Development **132**:4017.
3. Guillaudeau, A. *et al.* (2012) PLoS One. **7**:1.
4. Reiter J.L. *et al.* (2001) Genomics **71**:1.
5. Freed, D.M. *et al.* (2017) Cell. **171**:683.
6. Burgess, A.W. *et al.* (2003) Mol. Cell **12**:541.
7. Faria, J.A. *et al.* (2016) BBRC. **478**:39.
8. Lee, C.K. *et al.* (2017) J. Thoracic Oncology. **12**:403.

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