Data Sheet (Cat.No.TMPY-02166)

TargetMol

Epiregulin Protein, Mouse, Recombinant (hFc)

General Information

Synonyms:	epiregulin;EPR
Protein Construction:	A DNA sequence encoding the mature form of mouse EREG (Q61521) (Val 56-Leu 101) was fused with the Fc region of human IgG1 at the N-terminus. Predicted N terminal: Glu
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q61521
Molecular Weight:	33.8 kDa (predicted); 37 kDa (reducing conditions)

QC Testing

Biological Activity:	Measured in a cell proliferation assay using Balb/3T3 mouse embryonic fibroblast cells. The ED50 for this effect is typically 0.5-2.5 μg/mL.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Epiregulin (EREG) is a member of the epidermal growth factor family. Epiregulin (EREG) can function as a ligand of EGFR (epidermal growth factor receptor), as well as a ligand of most members of the ERBB (v-erb-b2 oncogene homolog) family of tyrosine-kinase receptors. Epiregulin (EREG) exhibit bifunctional regulatory properties: it inhibit the growth of several epithelial tumor cells and stimulated the growth of fibroblasts and various other types of cells. Epiregulin (EREG) bound to the EGF receptors of epidermoid carcinoma A431 cells much more

weakly than did EGF, but was nevertheless much more potent than EGF as a mitogen for rat primary hepatocytes and Balb/c 3T3 A31 fibroblasts. These findings suggest that epiregulin (EREG) plays important roles in regulating the growth of epithelial cells and fibroblasts by binding to receptors for EGF-related ligands. Epiregulin (EREG) is the broadest specificity EGF-like ligand so far characterized: not only does it stimulate homodimers of both ErbB-1 and ErbB-4, it also activates all possible heterodimeric ErbB complexes.

Reference

Shelly M,et al.(1998) Epiregulin is a potent pan-ErbB ligand that preferentially activates heterodimeric receptor complexes. J Biol Chem. 1998 Apr 24;273(17):10496-505.

Shirakata Y,et al.(2000) Epiregulin, a novel member of the epidermal growth factor family, is an autocrine growth factor in normal human keratinocytes. J Biol Chem. 275(8): 5748-53.

Zhu Z,et al.(2000) Epiregulin is Up-regulated in pancreatic cancer and stimulates pancreatic cancer cell growth. Biochem Biophys Res Commun. 273(3): 1019-24.

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