Data Sheet (Cat.No.TMPY-03021)

TargetMol

ErbB4 Protein, Mouse, Recombinant (His)

General Information

Synonyms:	c-erbB-4;Her4;erb-b2 receptor tyrosine kinase 4
Protein Construction:	A DNA sequence encoding the mouse ERBB4 (Q99P91) (Met1-Leu652) was expressed with a C-terminal polyhistidine tag. Predicted N terminal: Gln 26
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q99P91
Molecular Weight:	71.5 kDa (predicted); 113 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured by its binding ability in a functional ELISA. Immobilized mouse ERBB4-His at 10 μg/ml (100 μl/well) can bind biotinylated human NRG1 , The EC50 of biotinylated human NRG1 is 0.55-1.29 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.

Shipping:

In general, Lyophilized powders are shipping with blue ice.

Protein Background

ERBB4 is a single-pass type I membrane protein with multiple cysteine rich domains, a transmembrane domain, a tyrosine kinase domain, a phosphotidylinositol-3 kinase binding site and a PDZ domain binding motif. ERBB4 is expressed at highest levels in brain, heart, kidney, in addition to skeletal muscle, parathyroid, cerebellum, pituitary, spleen, testis and breast. And lower levels in thymus, lung, salivary gland, and pancreas. It specifically

binds to and is activated by neuregulins, NRG-2, NRG-3, heparin-binding EGF-like growth factor, betacellulin and NTAK. ERBB4 also can be activated by other factors and induces a variety of cellular responses including mitogenesis and differentiation. ERBB4 regulates development of the heart, the central nervous system and the mammary gland, gene transcription, cell proliferation, differentiation, migration and apoptosis. It is required for normal cardiac muscle differentiation during embryonic development, and for postnatal cardiomyocyte proliferation. ERBB4 also play a role on the normal development of the embryonic central nervous system, especially for normal neural crest cell migration and normal axon guidance. It is required for mammary gland differentiation, induction of milk proteins and lactation.Cancer ImmunotherapyImmune CheckpointImmunotherapyTargeted Therapy

Reference

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Silberberg G, et al. (2006) The involvement of ErbB4 with schizophrenia: association and expression studies. Am J Med Genet. 141(B2):142-8.

Sardi SP, et al. (2006) Presenilin-dependent ErbB4 nuclear signaling regulates the timing of astrogenesis in the developing brain. Cell. 127(1):185-97.