

Rat HER4 / ErbB4 Protein (His Tag)

Catalog Number: 80125-R08H



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

ERBB4

Protein Construction:

A DNA sequence encoding the rat ERBB4 (AAQ77349.1)(Met1-Pro651) was expressed with a polyhistidine tag at the C-terminus.

Source: Rat

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio Activity:

Measured by its binding ability in a functional ELISA. Immobilized Human NRG1 Beta 1 Fc (Cat:11609-H01H2) at 2 µg/ml (100 µl/well) can bind Rat ErbB4 His(Cat:80125-R08H), the EC₅₀ of Rat ErbB4 His is 12-60 ng/mL.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Predicted N terminal: Gln 26

Molecular Mass:

The recombinant rat ERBB4 comprises 637 amino acids and predicts a molecular mass of 71.3 kDa. The apparent molecular mass of the recombinant protein is approximately 75-95 kDa in SDS-PAGE under reducing conditions due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Stability & Storage:

Samples are stable for twelve months from date of receipt at -20°C to -80°C.

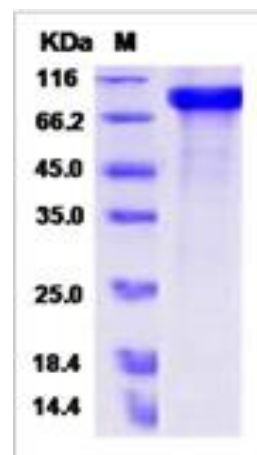
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

ERBB4 is a single-pass type I membrane protein with multiple cysteine rich domains, a transmembrane domain, a tyrosine kinase domain, a phosphatidylinositol-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.

References

- 1.Huang, Y Z, *et al.* (2000) Regulation of neuregulin signaling by PSD-95 interacting with ErbB4 at CNS synapses. *Neuron*. 26(2):443-55.
- 2.Garcia, R A, *et al.* (2000) The neuregulin receptor ErbB-4 interacts with PDZ-containing proteins at neuronal synapses. *Proc Natl Acad Sci*. 97(7):3596-601.
- 3.Silberberg G, *et al.* (2006) The involvement of ErbB4 with schizophrenia: association and expression studies. *Am J Med Genet*. 141(B2):142-8.