



Recombinant Protein Technical Manual  
Recombinant Human/Rhesus HER4/ErbB4 Protein  
(His Tag)(Active)  
RPES3837

### Product Data:

**Product SKU:** RPES3837

**Size:** 50µg

**Species:** Human

**Expression host:** HEK293 Cells

**Uniprot:** NP\_005226.1

### Protein Information:

**Molecular Mass:** 71.1 kDa

**AP Molecular Mass:** 102 kDa

**Tag:** C-His

**Bio-activity:** Measured by its binding ability in a functional ELISA. Immobilized human ErbB4-His at 10 µg/ml (100 µl/well) can bind biotinylated human NRG1, The EC50 of biotinylated human NRG1 is 0.4-0.92 µg/ml.

**Purity:** > 85 % as determined by reducing SDS-PAGE.

**Endotoxin:** < 1.0 EU per µg as determined by the LAL method.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from sterile PBS, pH7.4

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:** Functional ELISA

**Synonyms:** Receptor tyrosine-protein kinase erbB-4; Proto-oncogene-like protein c-ErbB-4; Tyrosine kinase-type cell surface receptor HER4; p180erbB4; ERBB4; HER4

## Immunogen Information:

**Sequence:** Met 1-Arg649

## Background:

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.