

Product Specification Sheet

**Her-2/neu(erbB-2) protein**

□ Cat #HER27-R-10

Recombinant (HEK) rat Her2/ErbB2/Neu (4-656)-his tag fusion protein

**Size: 10 ug**

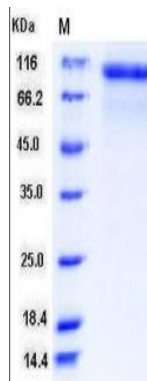
HER2/neu (also known as ErbB-2, ERBB2) is a protein (protein accession # P04626; 1255 aa, ~185 kDa, chromosome 17q21.1) highly expressed in breast cancers. It is a cell membrane surface-bound receptor tyrosine kinase and is normally involved in the signal transduction pathways leading to cell growth and differentiation. The oncogene neu is so-named because it was derived from a neuroglioblastoma cell line in rat. ErbB2 was named for its similarity to ErbB (avian erythroblastosis oncogene B). Excessive ErbB signaling is associated with the development of a wide variety of types of solid tumor. Insufficient ErbB signaling in humans is associated with the development of neurodegenerative diseases, such as multiple sclerosis and Alzheimer's disease.

Rat ErbB2 is an essential component of a neuregulin-receptor complex, although neuregulins do not interact with it alone. GP30 is a potential ligand for rat ErbB2. It binds to the 5'-TCAAATTC-3' sequence in the MTCO2 promoter and activates its transcription. ErbB2 is widely expressed in epithelial cells, and amplification and/or over expression of ErbB2 has been reported associated with malignancy and a poor prognosis in numerous carcinomas, including breast, prostate and ovarian cancers. ErbB2 cannot bind growth factors due to the lacking of ligand binding domain of its own and auto inhibited constitutively. This receptor forms a heterodimer with other ligand-bound EGF receptor family members, therefore stabilizes ligand binding and enhances kinase-mediated activation of downstream molecules. ErbB2 mediates signaling pathways which involve mitogen-activated protein kinase and phosphatidylinositol-3 kinase, this receptor plays a key role in development, cell proliferation and differentiation.

**Stability:** 6-12 months at -20°C or below.

**Shipping:** 4°C for solutions and room temp for lyophilized items.

**Sources of antigen and antibodies**



Rat ErbB2.neu protein (4-656 aa, protein accession # AAH61863.1) was expressed in HEK cells as CT his-tag fusion protein and purified (>95%). Recombinant ErbB2 protein (#HER27-R-10) is ~110 kDa under reducing conditions. It is supplied in PBS, pH 7.4, and 5-8% Trehalose in liquid or lyophilized in the same buffer. Reconstitute powder in PBS and store at -20°C in suitable size aliquots. It is desirable to add 0.1% BSA or HAS as protein carrier if it doesn't interfere with the assay for stability purpose.

**Endotoxin:** <1 EU/ug of protein by LAL method.

**Storage**

**Short-term:** Liquid, unopened, undiluted vials for less than a week at 4°C and powder up to several months at 4°C.

**Long-term:** at -20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

**Stability:** 6-12 months at -20°C or below.

**Shipping:** 4°C for solutions and room temp for lyophilized items.

**Recommended Usage**

**Western blot:** The recombinant rat ErbB2 comprises 642 amino acids and predicts a molecular mass of 71.3 kDa. The apparent molecular mass of the rat ErbB2 is approximately 110 kDa in SDS-PAGE under reducing conditions recombinant her2 ~110 kDa.

**ELISA** for coating at 1-10 ug/ml.

**General References:** (1) Yamamoto T (1986) Nature 319, 230-234; Semba K (1985) PNAS 82, 6497-6501; Akiyama T (1986) Science 232, 1644-1646; Bargmann CI (1986) Nature 319, 226-230; Coussens L (1985) Science 230, 1132-1139; Doherty JK (1999) PNAS 96, 10689-10874

*This product is for In vitro research use only.*

**Related Items**

Catalog#	prod Description
HER21-C	Recombinant human Her-2/neu(erbB-2)-Fc protein control for WB
HER21-M	Mouse Monoclonal anti-human Her-2/neu(erbB-2) protein IgG, aff pure
HER21-R-10	Recombinant (HEK) human Her2/ErbB2/Neu (1-652)-hlgG-Fc fusion protein
HER22-R-5	Recombinant (sf9) human Her2/ErbB2/Neu (676-1255)-GST fusion protein
HER23-R-10	Recombinant (HEK) human Her2/ErbB2/Neu (23-652)-his tag fusion protein
HER24-R-10	Recombinant (HEK) mouse Her2/ErbB2/Neu (23-653)-his tag fusion protein
HER2-563-P	HER2 peptide, cyclic, (563-598, cys-cys disulphide bond); vaccine candidate
HER2-585-P	HER2 peptide, cyclic, (585-598, cys-cys disulphide bond); vaccine candidate
HER2-597-P	HER2 peptide, cyclic, (597-626, cys-cys disulphide bond) vaccine candidate
HER25-R-20	Recombinant (E. Coli) Her-2/neu(erbB-2) Herstatinprotein, purified
HER2-613-P	HER2 peptide, cyclic, (613-626, cys-cys disulphide bond); vaccine candidate
HER2-654-P	HER2 peptide, (654 – 662), GP2 vaccine candidate
HER26-R-10	HER2/ErbB2 recombinant protein (676–1255, intracellular domain), Human (E. coli), GST Tag
HER26-R-10	Recombinant (HEK) mouse Her2/ErbB2/Neu (1-653)-hlgG1-Fc fusion protein
HER2-776-P	HER2 peptide, (776 – 790 fused with LRMK, C-Term ), GP2 vaccine candidate
HER27-R-10	Recombinant (HEK) rat Her2/ErbB2/Neu (4-656)-his tag fusion protein
HER28-R-10	Recombinant (HEK) rat Her2/ErbB2/Neu (4-656)-hlgG1-Fc fusion protein
HER29-R-10	Recombinant (HEK) monkey/rhesus Her2/ErbB2/Neu (1-652)-his tag fusion protein
HER33-M	Mouse mono anti-monkey/rhesus Her2/ErbB2/Neu (1-652) protein IgG
HER34-A	Anti-monkey/rhesus Her2/ErbB2/Neu (1-652) protein IgG
HER35-M	Humanized anti-human Her2/ErbB2/Neu protein IgG (Herceptin Biosimilar)

**HER27-R-10**

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