

Product Specification Sheet

Cat # HER24-R-10 **Recombinant (HEK) mouse Her2/Erb2/Neu (23-653)-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). Herstatin, as the product of alternative HER-2 transcript, retains intron 8. The herstatin mRNA is expressed in normal human fetal kidney and liver, but is at reduced levels relative to p185HER-2 mRNA in carcinoma cells that contain an amplified HER-2 gene. Herstatin appears to be an inhibitor of p185HER-2, because it disrupts dimers, reduces tyrosine phosphorylation of p185, and inhibits the anchorage-independent growth of transformed cells that overexpress HER-2

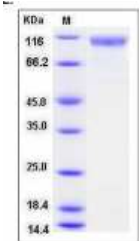
ERBB2 overexpression confers resistance to taxol-induced apoptosis by inhibiting p34(CDC2) activation. One mechanism is via ERBB2-mediated upregulation of p21(CIP1), or CDKN1A, which inhibits CDC2. Overexpression also occurs in other cancer such as ovarian cancer and stomach cancer. Clinically, HER2/neu is important as the target of the monoclonal antibody trastuzumab (marketed as Herceptin). Trastuzumab is only effective in breast cancer where the HER2/neu receptor is overexpressed. One of the mechanisms of how trastuzumab works after it binds to HER2 is by increasing p27, a protein that halts cell proliferation. Another monoclonal antibody, pertuzumab, which inhibits dimerization of HER2 and HER3 receptors, is in advanced clinical trials.

Human Her2 protein has an extra cellular domain (1-652 a.a), a transmembrane domain (653-675 a.a) and an intracellular domain (676 – 1255 a.a).

Protein name Receptor tyrosine-protein kinase erbB-2 [Precursor]
Synonyms EC 2.7.10.1, p185erbB2, C-erbB-2, NEU proto-oncogene, Tyrosine kinase-type cell surface receptor HER2, MLN 19, CD340 antigen HER2, NEU, NGL

Gene name Name: ERBB2

Sources of antigen and antibodies



Mouse Erbb2.neu protein (23-653aa, protein accession #AAH53078.1) was expressed in HEK cells as his-tag fusion protein and purified (>95%). Recombinant Erbb2-Fc chimeric protein (#HER24-R-10) is ~100-115 kda under reducing conditions. It is supplied in PBS, pH 7.4, and 1% Trehalose in liquid or lyophilized in the same buffer. **Reconstitute** powder in PBS and store at -20oC 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 4oC and powder up to several months at 4oC.

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

Stability: 6-12 months at -20oC or below.

Shipping: 4oC for solutions and room temp for lyophilized items.

Recommended Usage

Western blot: recombinant her2 ~100-115 Kda.

ELISA (1:10-50K; 10-100 ng of control protein/well).

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#	ProdDescription
HER23-R-10	Recombinant (HEK) human Her2/Erb2/Neu (23-652)-his tag fusion protein
HER24-R-10	Recombinant (HEK) mouse Her2/Erb2/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-A	Anti-HER2 peptide IgG (cyclic 597-626 vaccine candidate) Aff pure
HER2-597-P	HER2 peptide, cyclic, (597-626, cys-cys disulphide bond) vaccine candidate
HER25-R-10	Recombinant (HEK) mouse Her2/Erb2/Neu (1-653)-hlgG1-Fc fusion protein
HER25-R-10	HER2/ErB2 recombinant protein (1-652, extracellular domain), Human (E. coli)
HER25-R-100	Recombinant (E. Coli) Her-2/neu(erbB-2) protein,
HER25-R-20	Recombinant (E. Coli) Her-2/neu(erbB-2) protein,
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	Recombinant (HEK) rat Her2/Erb2/Neu (4-656)-his tag fusion protein
HER26-R-10	HER2/ErB2 recombinant protein (676–1255, intracellular domain), Human (E. coli), GST Tag
HER2-776-P	HER2 peptide, (776 – 790 fused with LRmk, C-Term), GP2 vaccine candidate
HER27-R-10	Recombinant (HEK) rat Her2/Erb2/Neu (4-656)-his tag fusion protein
HER28-R-10	Recombinant (HEK) rat Her2/Erb2/Neu (4-656)-hlgG1-Fc fusion protein
HER29-R-10	Recombinant (HEK) monkey/rhesus Her2/Erb2/Neu (1-652)-his tag fusion protein
200-510-HLG	Herceptin/Trasuzumab ELISA Kit for human, 96 tests
200-520-HAG	Human Anti-Herceptin/Trasuzumab Antibody (HAHA) ELISA Kit 96 tests
200-600-HRH	Human Anti-Her2 Protein (ECD) IgG ELISA kit for Her2 vaccine
200-610-HRM	Human Anti-Her2 Protein (ECD) IgM ELISA kit for Mouse Anti-Her2 Protein (ECD) ELISA kit for Her2
200-620-HRH	Mouse Anti-Her2 Protein (ECD) IgM ELISA kit for Her2 vaccine
200-630-HRM	Human Anti-Her2 vaccine (E75-peptide) IgG ELISA
200-640-HRH	Mouse Anti-Her2 vaccine (E75-peptide) IgG ELISA kit
200-660-HRH	Human Anti-Her2 vaccine (AE37-peptide) IgG ELISA
200-700-HRH	Mouse Anti-Her2 vaccine (AE37-peptide) IgG ELISA
200-720-HRH	Herceptin/Trasuzumab ELISA Kit for human, 96 tests
200-510-HLG	Her2/neu/Erbb2/CD340 protein ELISA kit, 96 tests
200-530-HER	Human Anti-Her2 Protein (ECD) IgG ELISA kit for
200-600-HRH	Human Anti-Her2 Protein (ECD) IgG ELISA kit for
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