

Datasheet for ABIN921095
ErbB2/Her2 ELISA Kit



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Overview

Quantity: 96 tests

Target: ErbB2/Her2

Binding Specificity: AA 23-652

Reactivity: Human

Method Type: Sandwich ELISA

Detection Range: 62.5-4000 pg/mL

Minimum Detection Limit: 62.5 pg/mL

Application: ELISA

Product Details

Purpose: Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human ErbB-2

Brand: PicoKine™

Sample Type: Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA), Tissue Homogenate

Analytical Method: Quantitative

Detection Method: Colorimetric

Immunogen: Expression system for standard: NSO
Immunogen sequence: T23-T652

Specificity: Expression system for standard: NSO
Immunogen sequence: T23-T652

Cross-Reactivity (Details): There is no detectable cross-reactivity with other relevant proteins.

Product Details

Sensitivity:	<10pg/mL
Material not included:	Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation of 0.01M TBS: Add 1.2g Tris, 8.5g NaCl

Target Details

Target:	ErbB2/Her2
Alternative Name:	ERBB2 (ErbB2/Her2 Products)
Background:	<p>Protein Function: Protein tyrosine kinase that is part of several cell surface receptor complexes, but that apparently needs a coreceptor for ligand binding. Essential component of a neuregulin-receptor complex, although neuregulins do not interact with it alone. GP30 is a potential ligand for this receptor. Regulates outgrowth and stabilization of peripheral microtubules (MTs). Upon ERBB2 activation, the MEMO1-RHOA-DIAPH1 signaling pathway elicits the phosphorylation and thus the inhibition of GSK3B at cell membrane. This prevents the phosphorylation of APC and CLASP2, allowing its association with the cell membrane. In turn, membrane-bound APC allows the localization of MACF1 to the cell membrane, which is required for microtubule capture and stabilization.</p> <p>Background: HER2/neu(also known as ErbB-2) stands for "Human Epidermal growth factor Receptor 2" and is a protein giving higher aggressiveness in breast cancers. It is a member of the ErbB protein family, more commonly known as the epidermal growth factor receptor family. HER2/neu has also been designated as CD340(cluster of differentiation 340) and p185. It is encoded by the ERBB2 gene.HER2 is a cell membrane surface-bound receptor tyrosine kinase and is normally involved in the signal transduction pathways leading to cell growth and differentiation. It is encoded within the genome by HER2/neu, a known proto-oncogene. HER2 is thought to be an orphan receptor, with none of the EGF family of ligands able to activate it. However, ErbB receptors dimerise on ligand binding, and HER2 is the preferential dimerisation partner of other members of the ErbB family.¹ The HER2 gene is a proto-oncogene located at the long arm of human chromosome 17(17q21-q22)².</p> <p>Synonyms: Receptor tyrosine-protein kinase erbB-2,2.7.10.1, Metastatic lymph node gene 19 protein,MLN 19,Proto-oncogene Neu,Proto-oncogene c-ErbB-2,Tyrosine kinase-type cell surface receptor HER2,p185erbB2,CD340,ERBB2,HER2, MLN19, NEU, NGL,</p> <p>Full Gene Name: Receptor tyrosine-protein kinase erbB-2</p> <p>Cellular Localisation: Isoform 1: Cell membrane, Single-pass type I membrane protein.</p>

Target Details

	Cytoplasm, perinuclear region. Nucleus. Translocation to the nucleus requires endocytosis, probably endosomal sorting and is mediated by importin beta-1/KPNB1.
Gene ID:	2064
UniProt:	P04626
Pathways:	RTK Signaling , Fc-epsilon Receptor Signaling Pathway , EGFR Signaling Pathway , Neurotrophin Signaling Pathway , Skeletal Muscle Fiber Development

Application Details

Application Notes:	Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well assay was recommended for both standard and sample testing.
Comment:	<p>Sequence similarities: Belongs to the protein kinase superfamily. Tyr protein kinase family. EGF receptor subfamily.</p> <p>Tissue Specificity: Expressed in a variety of tumor tissues including primary breast tumors and tumors from small bowel, esophagus, kidney and mouth. .</p>
Plate:	Pre-coated
Protocol:	human ErbB-2 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for ErbB-2 has been precoated onto 96-well plates. Standards(NSO, T23-T652) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for ErbB-2 is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the human ErbB-2 amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 4000pg/mL, 2000pg/mL, 1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL human ErbB-2 standard solutions into the precoated 96-well plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each properly diluted sample of human cell culture supernatants, serum, plasma(heparin, EDTA) or tissue lysates to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human ErbB-2 standard solution and each sample be measured in duplicate.
Assay Precision:	<ul style="list-style-type: none">Sample 1: n=16, Mean(pg/ml): 348, Standard deviation: 14.62, CV(%): 4.2

Application Details

- Sample 2: n=16, Mean(pg/ml): 1057, Standard deviation: 45.45, CV(%): 4.3
- Sample 3: n=16, Mean(pg/ml): 2334, Standard deviation: 91.03, CV(%): 3.9,
- Sample 1: n=24, Mean(pg/ml): 361, Standard deviation: 21.3, CV(%): 5.9
- Sample 2: n=24, Mean(pg/ml): 1049, Standard deviation: 67.14, CV(%): 6.4
- Sample 3: n=24, Mean(pg/ml): 2645, Standard deviation: 140.2, CV(%): 5.3

Restrictions: For Research Use only

Handling

Handling Advice: Avoid multiple freeze-thaw cycles.

Storage: -20 °C,4 °C

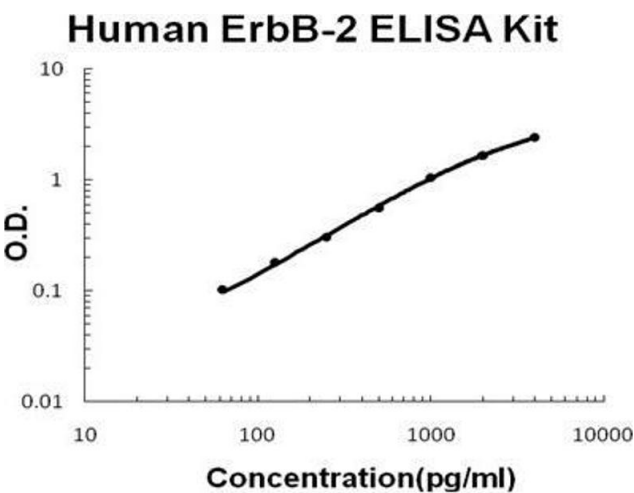
Storage Comment: Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles

Expiry Date: 12 months

Publications

Product cited in: Tao, Suhua, Juanjuan, Zongzhi, Juan, Dandan: "In vitro study on human cytomegalovirus affecting early pregnancy villous EVT's invasion function." in: **Virology journal**, Vol. 8, pp. 114, (2011) ([PubMed](#)).

Images



ELISA

Image 1. Human ErbB-2 PicoKine ELISA Kit standard curve