

Human ErbB2 / HER2 ELISA Kit ab100510

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Overview

Product name	Human ErbB2 / HER2 ELISA Kit
Detection method	Colorimetric
Sample type	Cell culture supernatant, Serum, Plasma
Assay type	Sandwich (quantitative)
Sensitivity	< 8 pg/ml
Range	8.19 pg/ml - 2000 pg/ml
Recovery	> 81 %

Sample specific recovery

Sample type	Average %	Range
Cell culture supernatant	82.77	70% - 96%
Serum	91.93	76% - 106%
Plasma	81.32	69% - 97%

Assay duration Multiple steps standard assay

Species reactivity **Reacts with:** Human

**Product overview**

Abcam's ErbB2 (Epidermal Factor Growth Factor Receptor 2) Human ELISA (Enzyme-Linked Immunosorbent Assay) kit is an *in vitro* enzyme-linked immunosorbent assay for the quantitative measurement of human ErbB2 in serum, plasma, and cell culture supernatants.

This assay employs an antibody specific for human ErbB2 coated on a 96-well plate. Standards and samples are pipetted into the wells and ErbB2 present in a sample is bound to the wells by the immobilized antibody. The wells are washed and biotinylated anti-human ErbB2 antibody is added. After washing away unbound biotinylated antibody, HRP-conjugated streptavidin is pipetted to the wells. The wells are again washed, a TMB substrate solution is added to the wells and color develops in proportion to the amount of ErbB2 bound. The Stop Solution changes the color from blue to yellow, and the intensity of the color is measured at 450 nm.

**Notes** Optimisation may be required with urine samples.

**Platform** Microplate

## Properties

**Storage instructions** Store at -20°C. Please refer to protocols.

Components	1 x 96 tests
20X Wash Buffer	1 x 25ml
300X HRP-Streptavidin Concentrate	1 x 200µl
5X Assay Diluent B	1 x 15ml
Assay Diluent A	1 x 30ml
Biotinylated anti-Human ErbB2	2 vials
ErbB2 Microplate (12 strips x 8 wells)	1 unit
Recombinant Human ErbB2 Standard (lyophilized)	2 vials
Stop Solution	1 x 8ml
TMB One-Step Substrate Reagent	1 x 12ml

**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. In the nucleus is involved in transcriptional regulation. Associates with the 5'-TCAAATTC-3' sequence in the PTGS2/COX-2 promoter and activates its transcription. Implicated in transcriptional activation of CDKN1A; the function involves STAT3 and SRC. Involved in the transcription of rRNA genes by RNA Pol I and enhances protein synthesis and cell growth.

**Tissue specificity** Expressed in a variety of tumor tissues including primary breast tumors and tumors from small bowel, esophagus, kidney and mouth.

**Involvement in disease** Hereditary diffuse gastric cancer  
Glioma  
Ovarian cancer  
Lung cancer  
Gastric cancer  
Chromosomal aberrations involving ERBB2 may be a cause gastric cancer. Deletions within 17q12 region producing fusion transcripts with CDK12, leading to CDK12-ERBB2 fusion leading to truncated CDK12 protein not in-frame with ERBB2.

**Sequence similarities** Belongs to the protein kinase superfamily. Tyr protein kinase family. EGF receptor subfamily. Contains 1 protein kinase domain.

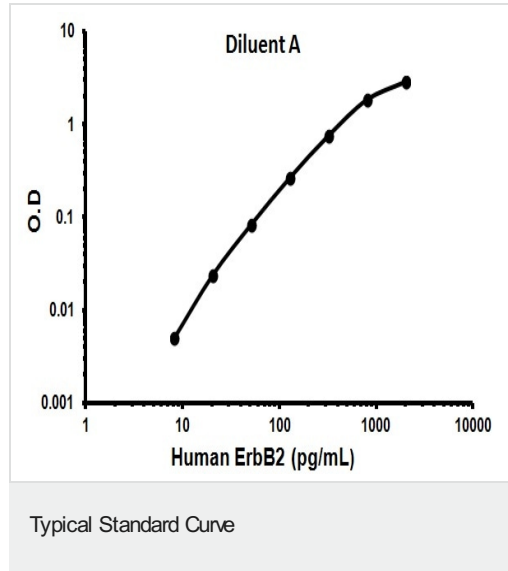
**Post-translational modifications** Autophosphorylated. Autophosphorylation occurs in trans, i.e. one subunit of the dimeric receptor phosphorylates tyrosine residues on the other subunit (Probable). Ligand-binding increases phosphorylation on tyrosine residues (PubMed:27134172). Signaling via SEMA4C promotes phosphorylation at Tyr-1248 (PubMed:17554007). Dephosphorylated by PTPN12

(PubMed:27134172).

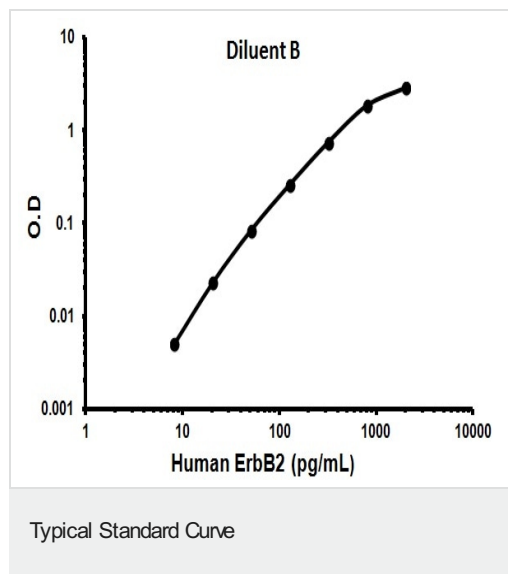
## Cellular localization

Cytoplasm. Nucleus and Cell membrane. Cytoplasm, perinuclear region. Nucleus. Translocation to the nucleus requires endocytosis, probably endosomal sorting and is mediated by importin beta-1/KPNB1.

## Images



Representative Standard Curve using ab100510.



Representative Standard Curve using ab100510.

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