



## Product Information Sheet

### Human ErbB-2 ELISA Kit

<b>Catalog No.</b>	EK0756
<b>Size</b>	96T
<b>Range</b>	62.5pg/ml-4000pg/ml
<b>Sensitivity</b>	< 10pg/ml

#### Specificity

No detectable cross-reactivity with any other cytokine.

#### Storage

Store at 4°C for frequent use, at -20°C for infrequent use.

Avoid multiple freeze-thaw cycles (Shipped with wet ice.)

#### Expiration

Four months at 4°C and eight months at -20°C.

#### Application

For quantitative detection of Human ErbB-2 in sera, plasma, body fluids, tissue lysates or cell culture supernates.

Human ErbB-2 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. Human ErbB-2 specific polyclonal antibodies were precoated onto 96-well plates. The human specific detection polyclonal antibodies were biotinylated. The test samples and biotinylated detection antibodies were added to the wells 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.

#### Kit Components

1. Lyophilized recombinant Human ErbB-2 standard: 10ng/tubex2.
2. One 96-well plate precoated with anti- Human ErbB-2 antibody.
3. Sample diluent buffer: 30 ml
4. Biotinylated anti- Human ErbB-2 antibody: 130µl, dilution 1:100.
5. Antibody diluent buffer: 12ml.
6. Avidin-Biotin-Peroxidase Complex (ABC): 130µl, dilution 1:100.
7. ABC diluent buffer: 12ml.
8. TMB color developing agent: 10ml.
9. TMB stop solution: 10ml.

#### Material Required But Not Provided

1. Microplate reader in standard size.
2. Automated plate washer.
3. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection.
4. Clean tubes and Eppendorf tubes.
5. Washing buffer (neutral PBS or TBS).

Preparation of 0.01M **TBS**: Add 1.2g Tris, 8.5g NaCl; 450µl of purified acetic acid or 700µl of concentrated hydrochloric acid to 1000ml H<sub>2</sub>O and adjust pH to 7.2-7.6. Finally, adjust the total volume to 1L.

Preparation of 0.01 M **PBS**: Add 8.5g sodium chloride, 1.4g Na<sub>2</sub>HPO<sub>4</sub> and 0.2g NaH<sub>2</sub>PO<sub>4</sub> to 1000ml distilled water and adjust pH to 7.2-7.6. Finally, adjust the total volume to 1L.

To reorder contact us at:

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#### Principle

**FOR RESEARCH USE ONLY. NOT FOR DIAGNOSTIC AND CLINICAL USE.**

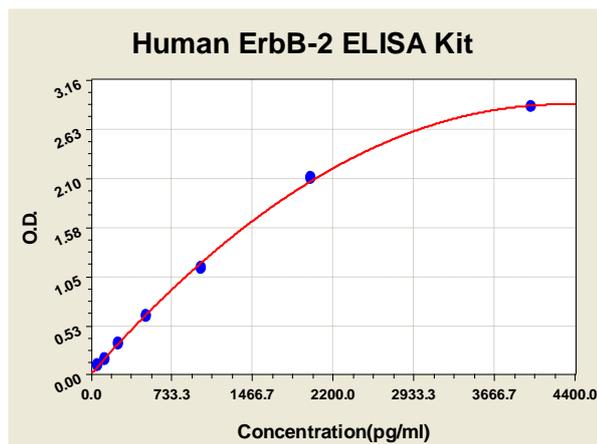
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## Notice for Application of Kit

1. Before using Kit, spin tubes and bring down all components to bottom of tube.
2. Duplicate well assay was recommended for both standard and sample testing.
3. Don't let 96-well plate dry, dry plate will inactivate active components on plate.
4. In order to avoid marginal effect of plate incubation due to temperature difference (reaction may be stronger in the marginal wells), it is suggested that the diluted ABC and TMB solution will be pre-warmed in 37°C for 30 min before using.

## Human ErbB-2 ELISA Kit-1X96 Well Plate Image



## 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.<sup>1</sup> The *HER2* gene is a proto-oncogene located at the long arm of human chromosome 17(17q21-q22)<sup>2</sup>.

## Reference

- 1、Olayioye MA (2001). "Update on HER-2 as a target for cancer therapy: intracellular signaling pathways of ErbB2/HER-2 and family members". *Breast Cancer Res* 3 (6): 385–389.
- 2、Coussens L; Yang-Feng, TL; Liao, YC; Chen, E; Gray, A; McGrath, J; Seeburg, PH; Libermann, TA et al. (1985). "Tyrosine Kinase Receptor with Extensive Homology to EGF Receptor Shares Chromosomal Location with neu Oncogene". *Science* 230 (4730): 1132–1139.

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