

## HER2/ERBB2 Protein, Human, Recombinant (hFc)

### General Information

|                       |                                                                                                                                                       |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Synonyms:             | NEU;CD340;HER-2/neu;HERV7Q;TKR1;erb-b2 receptor tyrosine kinase 2;MLN19;MLN 19;ERVWE1;ENV;HERVW;HERV-7q;HER-2;HERVWENV;EGFR2;NGL;HER2;ENVW;HERV-W-ENV |
| Protein Construction: | Thr23-Thr652                                                                                                                                          |
| Species:              | Human                                                                                                                                                 |
| Expression Host:      | HEK293 Cells                                                                                                                                          |
| Accession:            | P04626-1                                                                                                                                              |
| Molecular Weight:     | 96.1 kDa (Predicted); 100-120 kDa (Due to glycosylation)                                                                                              |

### QC Testing

|                      |                                                                                                                                                                                           |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Biological Activity: | Immobilized Human Her2, hFc Tag at 5 µg/ml (100 µl/well) on the plate. Dose response curve for Biotinylated Anti-Her2 Antibody , hFc Tag with the EC50 of 0.26 µg/ml determined by ELISA. |
| Purity:              | > 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC                                                                                                                         |
| Endotoxin:           | < 1.0 EU/µg of the protein as determined by the LAL method.                                                                                                                               |
| Formulation:         | Lyophilized from 0.22µm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.                                                            |

### Preparation and Storage

#### Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 µg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

#### Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

ErbB2, also called Neu and Her2 (human epidermal growth factor receptor 2), is a type I membrane glycoprotein that is a member of the ErbB family of tyrosine kinase receptors. ErbB family members serve as receptors for the epidermal growth factor (EGF) family of growth factors. 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.

Reference

Krawczyk N, et al. (2009) HER2 status on persistent disseminated tumor cells after adjuvant therapy may differ from initial HER2 status on primary tumor. *Anticancer Res.* 29(10): 4019-24.

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