

Human HER2 / ErbB2 Protein (His Tag)

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Catalog Number: C22-100-04

General Information

Gene Name Synonym:

CD340; ENV; ENVW; ERVWE1; HER-2; HER-2/neu; HER2; HERV-7g; HERV-W-ENV; HERV7Q; HERVW; HERVWENV; MLN 19; MLN19; NEU; NGL; TKR1

Protein Construction:

A DNA sequence encoding the extracellular domain (Met 1-Thr 652) of human ErbB2 (NP_004439.2) was fused with the polyhistidine tag at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: ≥ 90 % as determined by SDS-PAGE. ≥ 90 % as determined by SEC-HPLC. ≥ 90 % as determined by SEC-MALS (Routinely tested).

Bio Activity:

1. Immobilized Recombinant Human HER2 / ErbB2 Protein (His Tag) (Cat: 10004-H08H) at 1 µg/mL (100 µL/well) can bind Anti-HER2 (Research Grade Trastuzu*^mab biosimilar), the EC₅₀ is 0.5-2ng/mL (QC tested).
2. Measured by its ability to block anti-ErbB2 mediated inhibition of BT474 human breast ductal carcinoma cell proliferation. The ED₅₀ for this effect is 0.2-1 µg/mL in the presence of 0.6 µg/mL Anti-ErbB2/Her2 Monoclonal Antibody (Routinely tested).
3. Captured anti-Her2 IgG1 antibody on proA Chip can bind Her2 (Cat.No.10004-H08H) with an affinity constant of 3.270 nM as determined in a SPR assay (Biacore T200) (Routinely tested).
4. Captured Anti-HER2 (Research Grade Trastuzumab biosimilar) on proA Chip can bind Her2 (Cat.No.10004-H08H) with an affinity constant of 3.727 nM as determined in a SPR assay (Biacore T200) (Routinely tested).
5. Loaded Anti-HER2 (Research Grade Pertuzumab biosimilar) on ProA Biosensor, can bind Recombinant Human Her2/ERBB2 Protein, His Tag (Cat. No. 10004-H08H) with an affinity constant of 0.382 nM as determined in BLI assay (Sartorius Octet RED384) (Routinely tested).
6. Loaded Anti-HER2 (Research Grade Trastuzumab biosimilar) on ProA Biosensor, can bind Recombinant Human Her2/ERBB2 Protein, His Tag (Cat. No. 10004-H08H) with an affinity constant of 0.547 nM as determined in BLI assay (Sartorius Octet RED384) (Routinely tested).
7. Immobilized Recombinant Human HER2 / ErbB2 Protein (His Tag) (Cat: 10004-H08H) at 1 µg/mL (100 µL/well) can bind Anti-HER2 (Research Grade Pertuzu*^mab Biosimilar), the EC₅₀ is 0.9-4ng/mL (Routinely tested).

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Predicted N terminal: Thr 23

Molecular Mass:

The recombinant human ErbB2 comprises 641 amino acids and has a calculated molecular mass of 71 kDa. As a result of glycosylation, rh ErbB2 migrates as an approximately 100-110 kDa protein in SDS-PAGE under reducing conditions. The molecular weight of this protein is around 87.5 kDa verified by SEC-MALS (Routinely tested).

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Stability & Storage:

Samples are stable for twelve months from date of receipt at -20°C to -80°C.

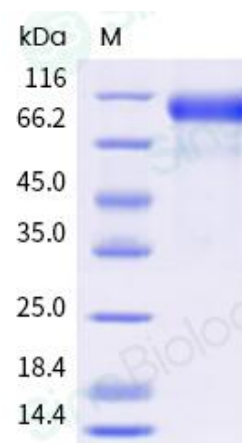
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Human epidermal growth factor receptor 2 (HER2), also known as ErbB2, NEU, and CD340, is a type I membrane glycoprotein and belongs to the epidermal growth factor (EGF) receptor family. HER2 protein cannot bind growth factors due to the lacking of ligand binding domain of its own and autoinhibited constitutively. However, HER2 forms a heterodimer with other ligand-bound EGF receptor family members, therefore stabilizes ligand binding and enhances kinase-mediated activation of downstream molecules. HER2 plays a key role in development, cell proliferation and differentiation. HER2 gene has been reported to associate with malignancy and a poor prognosis in numerous carcinomas, including breast, prostate, ovarian, lung cancers and so on.

References

3. 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.