

**Synonym**

ERBB2,CD340,HER-2,neu,HER2,MLN19,NEU,NGL,TKR1

**Source**

Human Her2 (S310F), His Tag(HE2-H52H2) is expressed from human 293 cells (HEK293). It contains AA Thr 23 - Thr 652 (Accession # [P04626-1](#) (S310F)).

Predicted N-terminus: Thr 23

**Molecular Characterization**

This protein carries a polyhistidine tag at the C-terminus. The protein has a calculated MW of 71.3 kDa. The protein migrates as 80-100 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation. This protein has been shown to weakly bind to Pertuzumab in our functional ELISA studies.

**Endotoxin**Less than 1.0 EU per  $\mu$ g by the LAL method / rFC method.**Purity**

&gt;95% as determined by SDS-PAGE.

**Formulation**Lyophilized from 0.22  $\mu$ m filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

**Reconstitution**

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

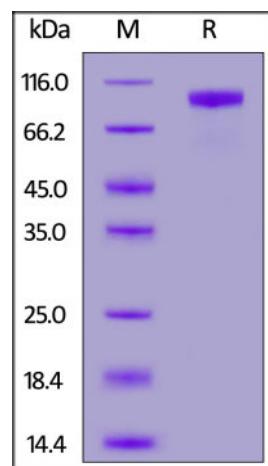
**Storage**

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

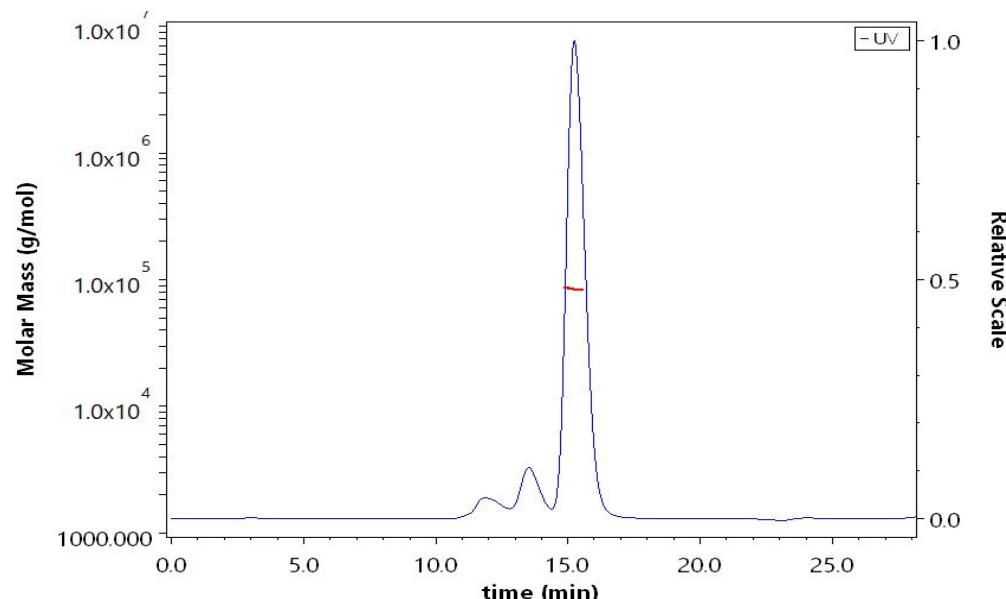
*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

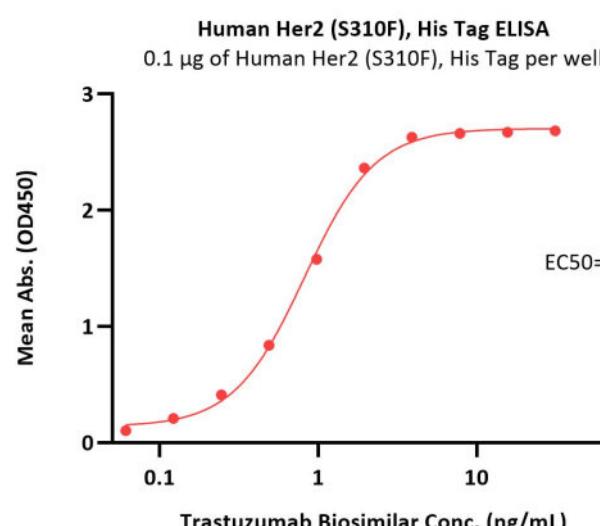
**SDS-PAGE**

Human Her2 (S310F), His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

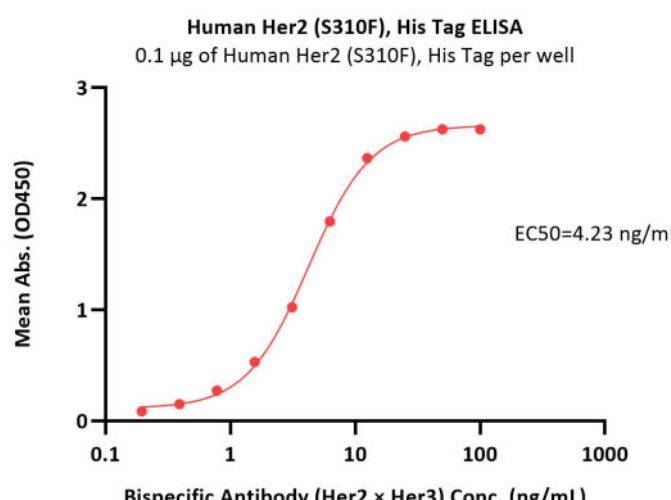
**SEC-MALS**

The purity of Human Her2 (S310F), His Tag (Cat. No. HE2-H52H2) is more than 80% and the molecular weight of this protein is around 75-110 kDa verified by SEC-MALS.

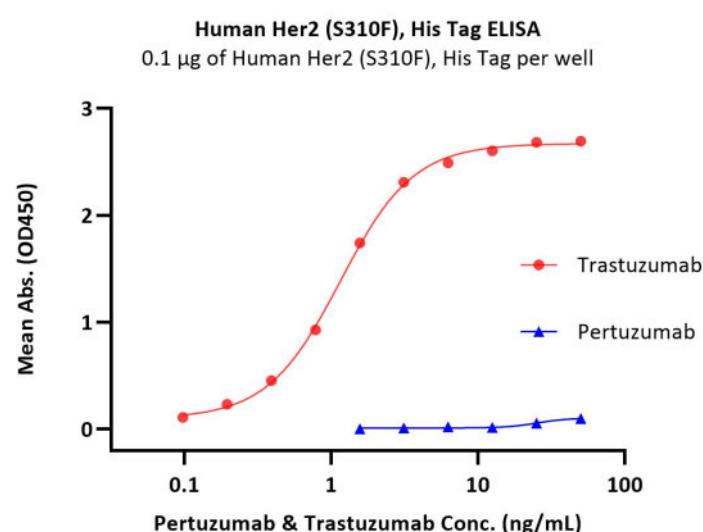
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Immobilized Human Her2 (S310F), His Tag (Cat. No. HE2-H52H2) at 1 µg/mL (100 µL/well) can bind Trastuzumab Biosimilar with a linear range of 0.1-2 ng/mL (QC tested).



Immobilized Human Her2 (S310F), His Tag (Cat. No. HE2-H52H2) at 1 µg/mL (100 µL/well) can bind Bispecific Antibody (Her2 × Her3) with a linear range of 0.2-12.5 ng/mL (Routinely tested).



Immobilized Human Her2 (S310F), His Tag (Cat. No. HE2-H52H2) at 1 µg/mL (100 µL/well) can bind Trastuzumab with a linear range of 0.1-3 ng/mL. This protein has been shown to weakly bind to Pertuzumab in our functional ELISA studies. (Routinely tested).

## Background

Human Epidermal growth factor Receptor 2 (HER2) is also called ERBB2, HER-2, HER-2 /neu, NEU, NGL, TKR1 and c-erb B2, 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 is a cell membrane surface-bound receptor tyrosine kinase and is normally involved in the signal transduction pathways leading to cell growth and differentiation. HER2 is thought to be an orphan receptor, with none of the EGF family of ligands able to activate it. Approximately 30% of breast cancers have an amplification of the HER2 gene or overexpression of its protein product. Overexpression of this receptor in breast cancer is associated with increased disease recurrence and worse prognosis. HER2 appears to play roles in development, cancer, communication at the neuromuscular junction and regulation of cell growth and differentiation.

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