Biotinylated Human Her2 / ErbB2 Protein, His,Avitag™, premium grade

Catalog # HE2-H82E2

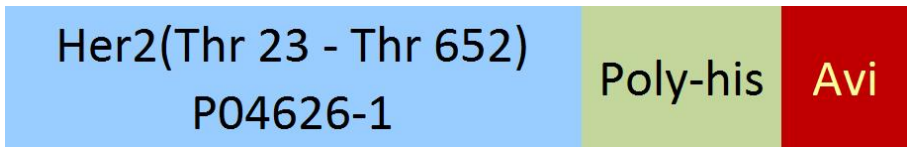
Synonym

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

Source

Biotinylated Human Her2, His,Avitag, premium grade (HE2-H82E2) is expressed from human 293 cells (HEK293). It contains AA Thr 23 - Thr 652 (Accession # P04626-1).
Predicted N-terminus: Thr 23
It is produced under our rigorous quality control system that incorporates a comprehensive set of tests including sterility and endotoxin tests. Product performance is carefully validated and tested for compatibility for cell culture use or any other applications in the early preclinical stage.
MBS-C006 is the GMP version of this HE2-H82E2. These two proteins display indistinguishable performance profiles, thereby ensuring a seamless transition for end users from early preclinical stag to later clinical phases.

Molecular Characterization



Other Tags and Version Biotin & Other Labeled Version

This protein carries a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™).
The protein has a calculated MW of 72.9 kDa. The protein migrates as 101 kDa±3 kDa under reducing (R) condition, and 94 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under non-reducing (NR) condition (SDS-PAGE) due to glycosylation.

Labeling

Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

Biotinylation

As determined by Quantitative ELISA binding assay against streptavidin.

Endotoxin

Less than 0.01 EU per μg by the LAL method / rFC method.

Host Cell Protein

<0.5 ng/μg of protein tested by ELISA.

Host Cell DNA

<0.02 ng/μg of protein tested by qPCR.

Sterility

Negative

Mycoplasma

Negative

Purity

>95% as determined by SDS-PAGE.
>90% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 μm 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

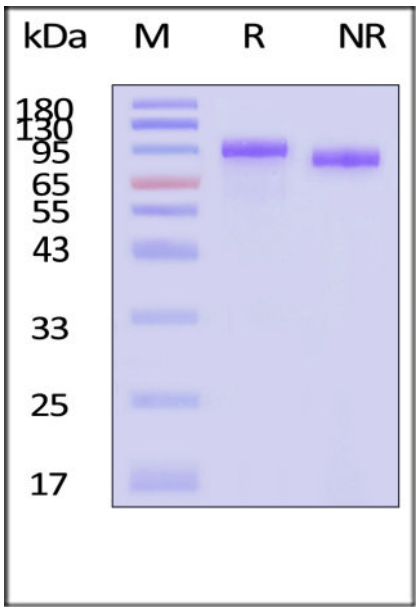
For long term storage, the product should be stored at lyophilized state at -20°C or lower.
Please avoid repeated freeze-thaw cycles.
This product is stable after storage at:

- -20°C to -70°C for 24 months in lyophilized state;
- -70°C for 12 months under sterile conditions after reconstitution.

ACRO Quality Management System

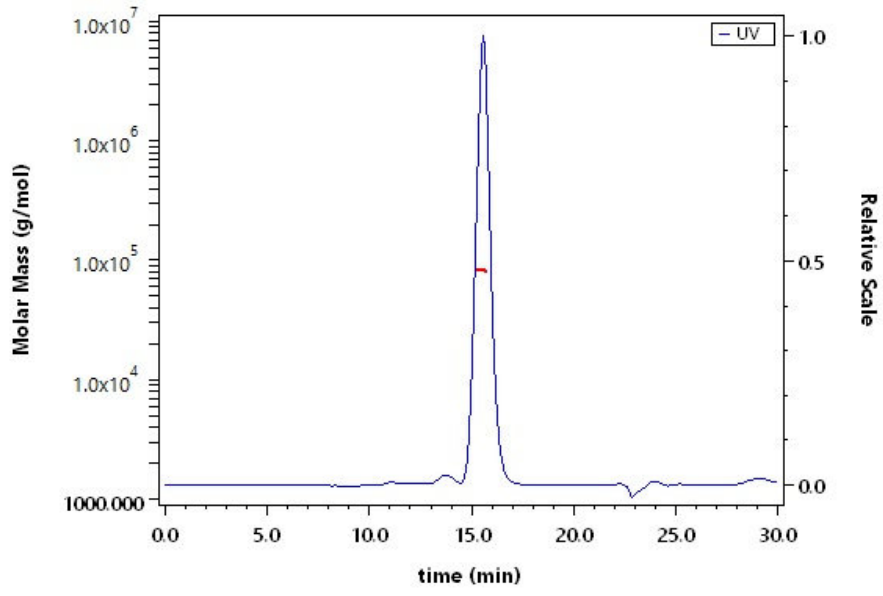
- QMS(ISO, GMP)
- Quality Advantages
- Quality Control Process

SDS-PAGE



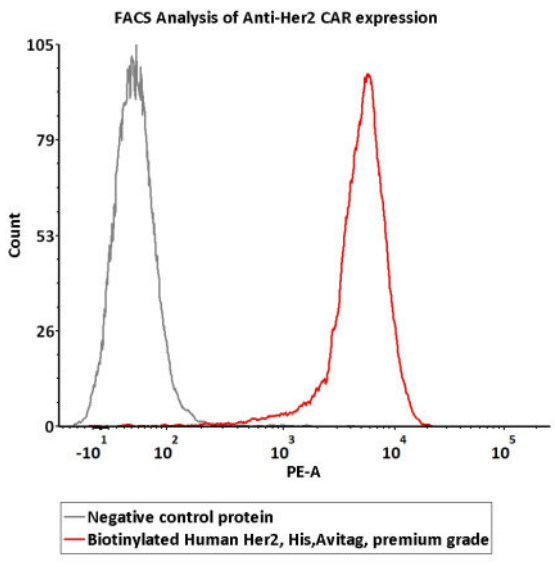
Biotinylated Human Her2, His,Avitag, premium grade on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With Star Ribbon Pre-stained Protein Marker).

SEC-MALS



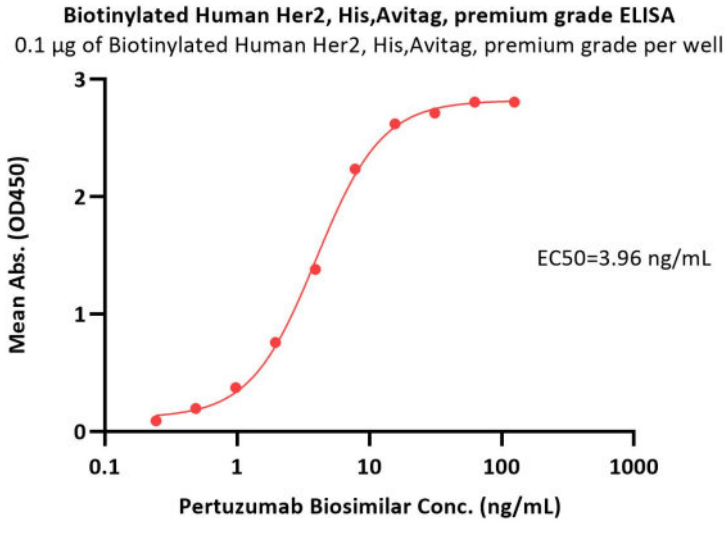
The purity of Biotinylated Human Her2, His,Avitag, premium grade (Cat. No. HE2-H82E2) is more than 90% and the molecular weight of this protein is around 75-110 kDa verified by SEC-MALS.

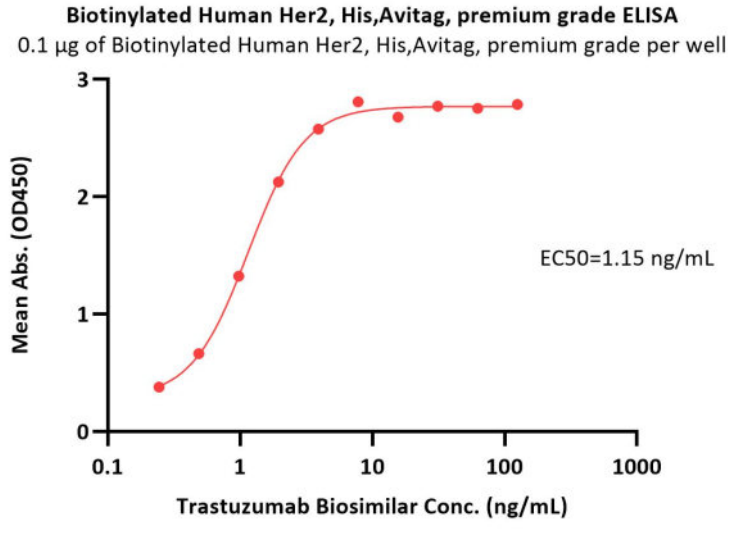
Bioactivity-FACS



2e5 of anti-Her2 CAR-293 cells were stained with 100 μL of 1 μg/mL of Biotinylated Human Her2, His,Avitag, premium grade (Cat. No. HE2-H82E2) and negative control protein respectively, washed and then followed by PE-SA and analyzed with FACS (QC tested).

Bioactivity-ELISA

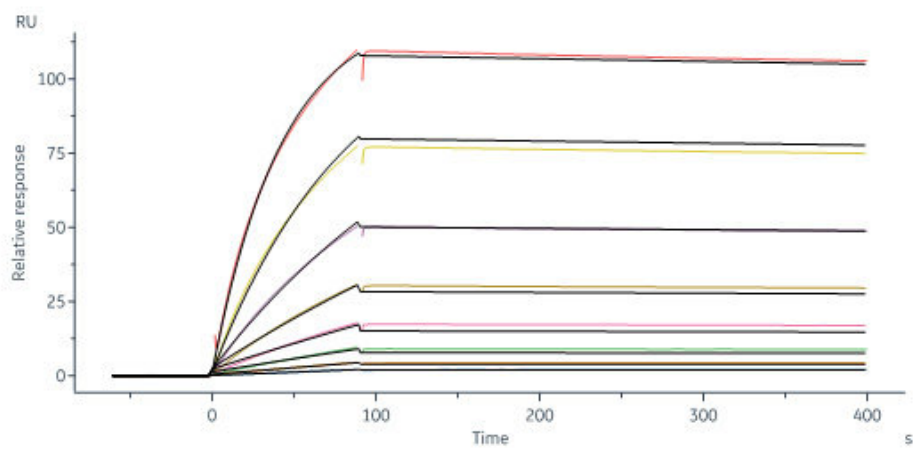




Immobilized Biotinylated Human Her2, His,Avitag, premium grade (Cat. No. HE2-H82E2) at 1 μg/mL (100 μL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 μg/well) plate can bind Pertuzumab Biosimilar with a linear range of 0.2-8 ng/mL (QC tested).

Immobilized Biotinylated Human Her2, His,Avitag, premium grade (Cat. No. HE2-H82E2) at 1 μg/mL (100 μL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 μg/well) plate can bind Trastuzumab Biosimilar with a linear range of 0.2-2 ng/mL (Routinely tested).

Bioactivity-SPR



Trastuzumab Biosimilar captured on Protein A Chip can bind Biotinylated Human Her2, His,Avitag, premium grade (Cat. No. HE2-H82E2) with an affinity constant of 7.49 nM as determined in a SPR assay (Biacore 8K) (QC 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 .