Biotinylated Human Her2 / ErbB2 Protein, His Tag, ultra sensitivity (primary amine labeling, long spacer) (MALS verified)

Catalog # HE2-H822R

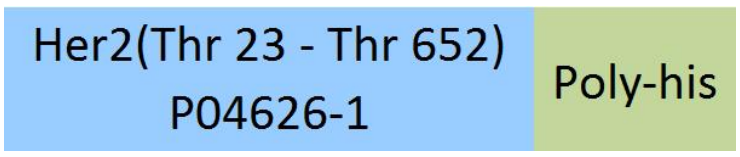
Synonym

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

Source

MABSol® Biotinylated Human Her2, His Tag, primary amine labeling, long spacer (HE2-H822R) is expressed from human HEK293 cells. It contains AA Thr 23 - Thr 652 (Accession # P04626-1). It is the biotinylated form of Human Her2, His Tag (Cat. No. HE2-H5225).
Predicted N-terminus: Thr 23

Molecular Characterization



This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 70.2 kDa. The protein migrates as 90-110 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE) due to glycosylation.

Labeling

The primary amines in the side chains of lysine residues and the N-terminus of the protein are conjugated with biotins using standard chemical labeling method. A specially optimized long-spacer biotin reagent (32.5 angstroms) is used in this product to minimize potential steric hindrance.

Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

Endotoxin

Less than 1.0 EU per μg by the LAL method.

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

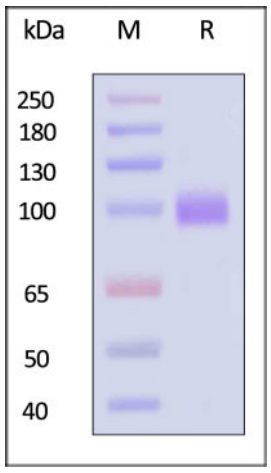
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

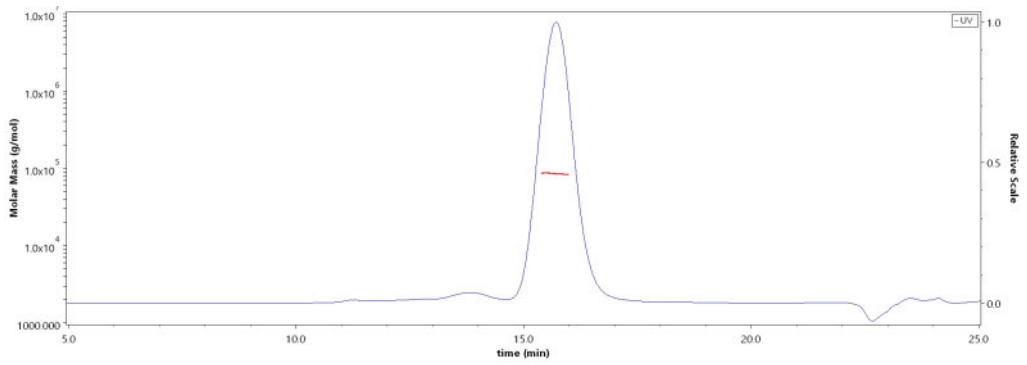
- -20°C to -70°C for 24 months in lyophilized state;
- -70°C for 12 months under sterile conditions after reconstitution.

SDS-PAGE



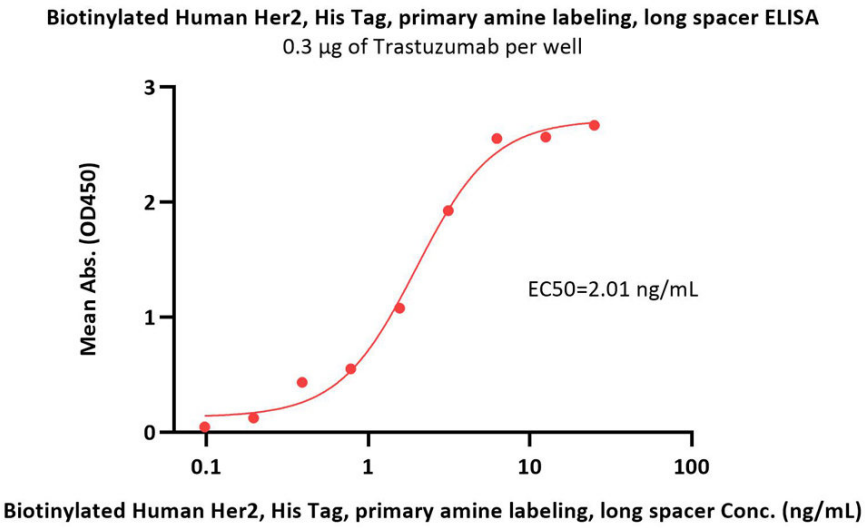
Biotinylated Human Her2, His Tag, primary amine labeling, long spacer on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With Star Ribbon Pre-stained Protein Marker).

SEC-MALS

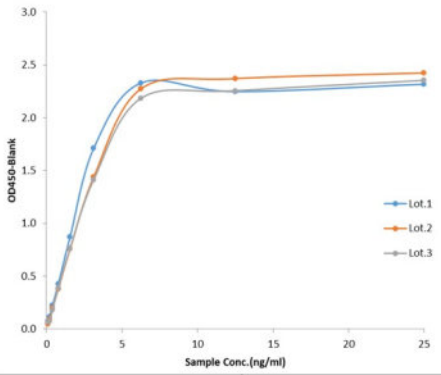


The purity of Biotinylated Human Her2, His Tag, primary amine labeling, long spacer (Cat. No. HE2-H822R) is more than 90% and the molecular weight of this protein is around 70-110 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA



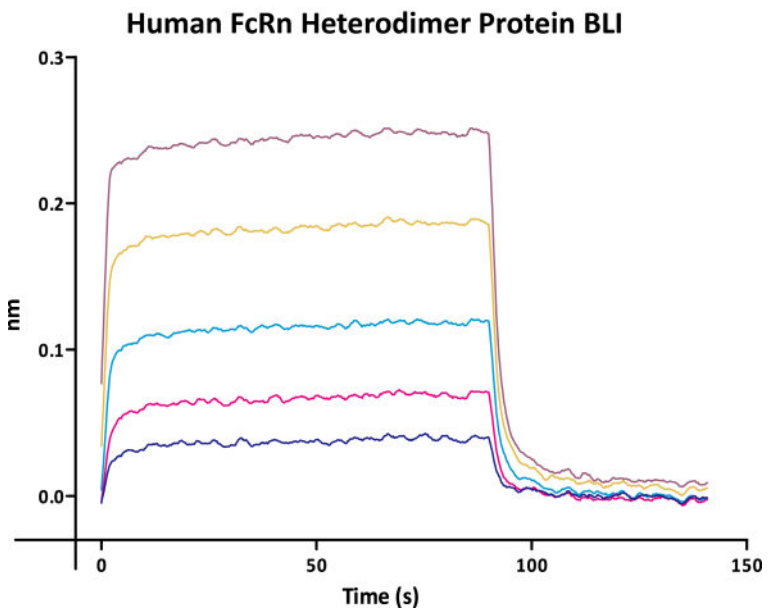
Batch consistency



Lot. No.	EC50(μg/mL)
Lot. No. 1	0.0020
Lot. No. 2	0.0025
Lot. No. 3	0.0023

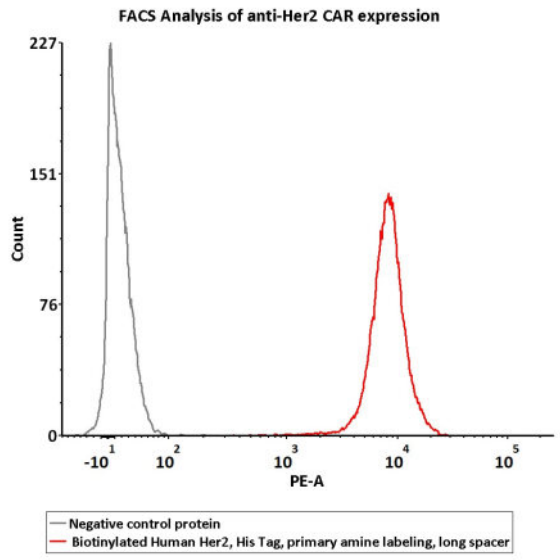
Immobilized Trastuzumab at 3 μg/mL (100 μL/well) can bind Biotinylated Human Her2, His Tag, primary amine labeling, long spacer (Cat. No. HE2-H822R) with a linear range of 0.1-3.1 ng/mL (QC tested).

Bioactivity-BLI



Immobilized Herceptin on SA Biosensor via Biotinylated Human Her2, His Tag, primary amine labeling, long spacer (Cat. No. HE2-H822R), can bind Human FCGRT&B2M Heterodimer Protein, His Tag&Strep II Tag (SPR & BLI verified) (Cat. No. FCM-H5286) with an affinity constant of 1.32 μM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Bioactivity-FACS



2e5 of Anti-Her2 CAR-293 cells were stained with 100 μL of 1μg/mL of Biotinylated Human Her2, His Tag, primary amine labeling, long spacer (Cat. No. HE2-H822R) and negative control protein respectively, washed and then followed by PE-SA and analyzed with FACS (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 .

Clinical and Translational Updates