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## ErbB2/Her2 Protein (AA 23-652) (His tag, Biotin)

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**Publications** 



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#### Overview

Quantity:	200 μg
Target:	ErbB2/Her2
Protein Characteristics:	AA 23-652
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This ErbB2/Her2 protein is labelled with His tag,Biotin.

#### **Product Details**

Brand:	MABSol®,UltraLys
Sequence:	AA 23-652
Specificity:	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 standard biotin reagent (13.5 angstroms) is used in this product.
Characteristics:	This protein carries a polyhistidine tag at the C-terminus. The protein has a calculated MW of 70.2 kDa. The protein migrates as 110-115 kDa on a SDS-PAGE gel under reducing (R) condition due to glycosylation.
Purity:	>95 % as determined by reduced SDS-PAGE.
Endotoxin Level:	Less than 1.0 EU per μg by the LAL method.

### Target Details

Target:	ErbB2/Her2
Alternative Name:	Her2 (ErbB2/Her2 Products)
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 .
Molecular Weight:	70.2 kDa
NCBI Accession:	NP_004439
Pathways:	RTK Signaling, Fc-epsilon Receptor Signaling Pathway, EGFR Signaling Pathway, Neurotrophin Signaling Pathway, Skeletal Muscle Fiber Development
Application Details	
Comment:	A chemically labeled biotinylated protein with ultra sensitivity.  The product is produced using a chemical labeling approach. The primary amines in the side chains of lysine residues and the N-terminus of protein are conjugated with biotins.  Chemical labeling usually results in multiple biotin attachment on a single protein molecule, which could potentially lead to higher detection sensitivity.
Restrictions:	For Research Use only
Handling	
Format:	Lyophilized
Buffer:	PBS, pH 7.4
Handling Advice:	Please avoid repeated freeze-thaw cycles.
Storage:	-20 °C

#### Handling

Storage Comment:

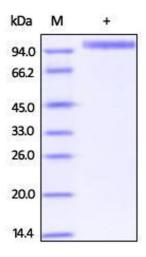
Lyophilized Protein should be stored at -20 °C or lower for long term storage. Upon reconstitution, working aliquots should be stored at -20 °C or -70 °C. Avoid repeated freezethaw cycles.

#### **Publications**

Product cited in:

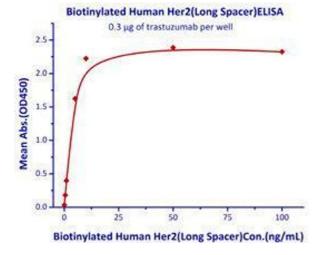
Schartl, Wilde, Laisney, Taniguchi, Takeda, Meierjohann: "A mutated EGFR is sufficient to induce malignant melanoma with genetic background-dependent histopathologies." in: **The Journal of investigative dermatology**, Vol. 130, Issue 1, pp. 249-58, (2009) (PubMed).

#### **Images**



#### **SDS-PAGE**

**Image 1.** Biotinylated Human Her2, Superior Sensitivity on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.



#### **Binding Studies**

**Image 2.** Immobilized trastuzumab at 3  $\mu$ g/mL (100  $\mu$ l/well) can bind Biotinylated Human Her2, Superior Sensitivity . The EC50 of Biotinylated Human Her2, Superior Sensitivity is 0.09-1 ng/mL.