Biotinylated Recombinant Human ErbB2/Her2 Fc Chimera

Catalog Number: BT1129

DESCRIPTION

Source

Mouse myeloma cell line, NS0-derived human ErbB2/Her2 protein

Human ErbB2 (Thr23-Thr652) Accession # NP_004439	IEGRMD	Human IgG_1 (Pro100-Lys330)	6-His tag

N-terminus C-terminus

N-terminal Sequence Analysis	Thr23
Structure / Form	Disulfide-linked homodimer, Biotinylated via amines
Predicted Molecular Mass	97 kDa

SPECIFICATIONS

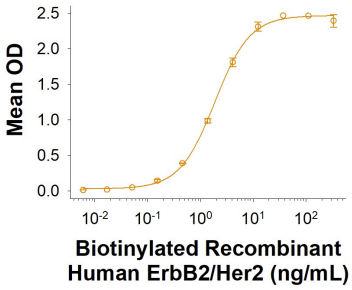
SDS-PAGE	105-130 kDa, under reducing conditions.
Activity	Measured by its binding ability in a functional ELISA. Biotinylated Recombinant Human ErbB2/Her2 Fc Chimera (Catalog # BT1129) binds to Human ErbB2/Her2 (Research Grade Trastuzumab Biosimilar) Antibody (Catalog # MAB9589) with an ED_{50} of 0.500-6.00 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in water.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

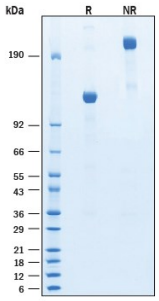
DATA

Binding Activity



Biotinylated Recombinant Human ErbB2/Her2 Fc Chimera Protein Binding Activity. In a functional ELISA, Biotinylated Recombinant Human ErbB2/Her2 Fc Chimera Protein (Catalog # BT1129) binds to Human ErbB2/Her2 (Research Grade Trastuzumab Biosimilar) Antibody (Catalog # MAB9589) with an ED_{50} of 0.500-6.00 ng/mL.

SDS-PAGE



Biotinylated Recombinant Human ErbB2/Her2 Fc Chimera Protein SDS-PAGE. 2 µg/lane of Biotinylated Recombinant Human ErbB2/Her2 Fc Chimera Protein (Catalog # BT1129) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 105-130 kDa and 210-260 kDa, respectively.

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USA | TEL: 800.343.7475 Canada | TEL: 855.668.8722 Europe | Middle East | Africa TEL: +44.0.1235.529449
China | info.cn@bio-techne.com TEL: 400.821.3475

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BACKGROUND

ErbB2, also called Neu and Her2 (human epidermal growth factor receptor 2), is a type I membrane glycoprotein that is a member of the ErbB family of tyrosine kinase receptors. ErbB family members serve as receptors for the epidermal growth factor (EGF) family of growth factors. ErbB2 is widely expressed in epithelial cells and has also been found to be over-expressed in a large number of breast carcinomas. Among ErbB family members, ErbB2 is unique in that it has no identified ligands. Rather, ErbB2 heterodimerizes with the other members of the ErbB family (ErbB1 (EGFR), ErbB3, ErbB4) to form higher affinity signaling complexes. Because ErbB3 contains a defective kinase domain, the kinase domain of ErbB2 is responsible for initiating the tyrosine phosphorylation signal through the heterodimeric receptor. It has been found that a discrete three amino acid signal in the ErbB3 cytoplasmic domain is critical for transactivation of ErbB2. Interestingly, this same three amino acid signal has also been found in ErbB1 and ErbB4. Phosphoinositide 3-kinase has been shown to play a role in ErbB2 signal transduction. The cytoplasmic domain of ErbB2 has been shown to associate with beta-catenin and plakoglobin. Human ErbB2 consists of 1255 amino acids (aa) with a 21 aa signal sequence, a 631 aa extracellular domain, a 23 aa transmembrane region, and a 580 aa cytoplasmic domain. ErbB2 can be shed from the cell surface by proteolytic cleavage by an unidentified protease. ErbB2 appears to play roles in development, cancer, communication at the neuromuscular junction and regulation of cell growth and differentiation (1-10).

References:

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