

## HER3/ERBB3 Protein, Human, Recombinant (aa 730-1065, His & GST)

### General Information

Synonyms:	c-erbB3;ErbB-3;p45-sErbB3;LCCS2;p85-sErbB3;HER3;EEBB3;MDA-BF-1;p180-ErbB3;c-erbB-3;erbB3-S;erb-b2 receptor tyrosine kinase 3
Protein Construction:	A DNA sequence encoding the cytoplasmic domain (Pro 730-Ser 1065) of human ErbB3 (NP_001973.2) was fused with the N-terminal polyhistidine-tagged GST tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	P21860-1
Molecular Weight:	65 kDa (predicted); 65 kDa (reducing conditions)

### QC Testing

Biological Activity:	1. No Kinase Activity 2. Using the Octet RED System, the affinity constant (Kd) of human ErBB3-GST bound to human NRG1 (aa 2-224) was 20 nM.
Purity:	> 75 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing 50 mM Tris, 100 mM NaCl, pH 7.5, 10% gly, 1 mM GSH. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

#### Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

#### Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

ErbB3, also known as Her3(human epidermal growth factor receptor3), is a member of the epidermal growth factor receptor (EGFR) family of receptor tyrosine kinases. This membrane-bound glycoprotein has a neuregulin

binding domain but has not an active kinase domain., and therefore can not mediate the intracellular signal transduction through protein phosphorylation. However, its heterodimer with ErbB2 or other EGFR members responsible for tyrosine phosphorylation forms a receptor complex with high affinity, and initiates the related pathway which lead to cell proliferation or differentiation. ErbB3 has been shown to implicated in numerous cancers, including prostate, bladder, and breast tumors. This protein has different isoforms derived from alternative splicing variants, and among which, the secreted isoform lacking the intermembrane region modulates the activity of membrane-bound form. Cancer Immunotherapy Immune Checkpoint Immunotherapy Targeted Therapy

### Reference

Kraus M.H., et al., (1989), Isolation and characterization of ERBB3, a third member of the ERBB/epidermal growth factor receptor family: evidence for overexpression in a subset of human mammary tumors. Proc. Natl. Acad. Sci. U.S.A. 86:9193-9197.

Plowman G.D., et al., (1990), Molecular cloning and expression of an additional epidermal growth factor receptor-related gene. Proc. Natl. Acad. Sci. U.S.A. 87:4905-4909.

Katoh M., et al., (1993), c-erbB3 gene encodes secreted as well as transmembrane receptor tyrosine kinase. Biochem. Biophys. Res. Commun. 192:1189-1197.

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