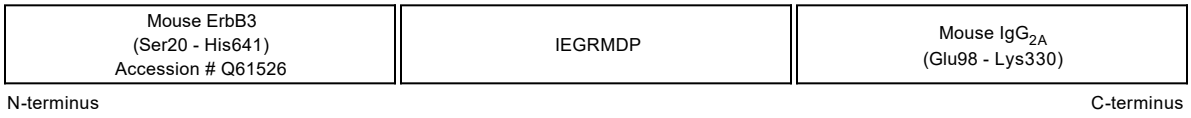
Recombinant Mouse ErbB3/Her3 Fc Chimera

Catalog Number: 4518-RB

DESCRIPTION

Source

Mouse myeloma cell line, NS0-derived



N-terminal Sequence Analysis	Ser20
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	95.6 kDa (monomer)

SPECIFICATIONS

SDS-PAGE	120-135 kDa, reducing conditions
Activity	Measured by its ability to bind Recombinant Human NRG1-β1/HRG1-β1 Extracellular Domain (Catalog # 377-HB) in a functional ELISA with an estimated K_D <15 nM.
Endotoxin Level	<0.01 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/mL in sterile PBS.
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.

BACKGROUND

ErbB3, also called HER3 (human epidermal growth factor receptor 3) in humans, is a type I transmembrane glycoprotein that is a member of the ErbB family of tyrosine kinase receptors named for a viral oncogene (1 - 3). ErbB family members serve as receptors for the EGF family of growth factors (1 - 3). Mouse ErbB3 contains a 19 amino acid (aa) signal sequence, a 622 aa extracellular domain (ECD), a 24 aa transmembrane region, and a 677 aa cytoplasmic domain (4). Human ErbB3 has four isoforms created by intron read-through and truncation of the molecule (5). Three of these are secreted and at least one can inhibit ErbB3 activity (6). Little information is available concerning mouse ErbB3 isoforms. The mouse ErbB3 ECD shares 97%, 93%, 92%, 91%, 89% and 88% aa identity with rat, human, bovine, equine, canine and opossum ErbB3, respectively. ErbB3 is found in epithelial cell layers of gastrointestinal, reproductive, urinary, endocrine and nervous systems, skin and muscle (3). Among ErbB family members, only ErbB3 lacks a working kinase domain, requiring heterodimerization with another ErbB receptor for signaling (1 - 3). The heterodimer of ErbB3 with ErbB2, which has no known ligands of its own, is expressed in the majority of breast, skin, ovary and gastrointestinal tumors and transduces a highly mitogenic signal in response to neuregulin 1 (NRG1; heuregulin 1) or NRG2 (3, 7 - 9). These ligands also bind ErbB4 (1). Signaling is aided by the six consensus binding motifs for the SH2 domain and one for the SH3 domain of the regulatory p85 subunit of phosphoinositide 3-kinase (10, 11). Deletion studies in mice demonstrate non-redundant roles for ErbB3 in development of Schwann cells, neural crest cells and heart valves (12, 13). ErbB3, ErbB2 and neuregulin are all required for formation of the sympathetic nervous system (14).

References:

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