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Her3/ErbB3

Catalog # PVGS1779

Product Information

Primary Accession	Q61526
Species	Mouse
Sequence	Ser20-His641
Purity	> 95% as determined by Bis-Tris PAGE > 95% as determined by HPLC
Endotoxin Level	Less than 1EU per □g by the LAL method.
Biological Activity	Immobilized Her3/ErbB3, His, Mouse (Cat.No.: Z03910) at 2 □g/ml (100 □l/Well) on the plate can bind Human NRG1 Beta 1, hFc Tag
Expression System	HEK293
Theoretical Molecular Weight	69.59 kDa
Formulation	Lyophilized from a 0.22 □m filtered solution in PBS, pH 7.4.
Reconstitution	It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH_2O more than 100 □g/ml.
Storage & Stability	Upon receiving, the product remains stable up to 6 months at -20 °C or below. Upon reconstitution, the product should be stable for 3 months at -80 °C. Avoid repeated freeze-thaw cycles. -80°C for 3 months after reconstitution. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.

Additional Information

Gene ID	13867
Other Names	Receptor tyrosine-protein kinase erbB-3, 2.7.10.1, Glial growth factor receptor, Proto-oncogene-like protein c-ErbB-3, Erbb3
Target Background	Her3, also called ErbB3, is a type I membrane glycoprotein that is a member of the ErbB family of tyrosine kinase receptors.Her3 is expressed in keratinocytes, melanocytes, skeletal muscle cells, embryonic myoblasts and Schwann cells. Monomeric Her3 serves as a low affinity receptor for the heregulins (HRG).

Protein Information

Name	Erbb3
Function	Tyrosine kinase receptor that, despite substitutions of key catalytic residues in the kinase domain, retains residual catalytic activity enabling autophosphorylation. Functions primarily as a heterodimer, preferentially partnering with ERBB2/HER2, which phosphorylates ERBB3 on specific tyrosine residues and provides the kinase activity required for downstream signaling. Binds neuregulins NRG1 and NRG2 through its extracellular domain, which induces conformational change from a tethered autoinhibited state to an extended conformation competent for dimerization. Upon heterodimerization and trans-phosphorylation, acts as the most efficient activator of the PI3K/AKT pathway within the ErbB family. Also activates the RAS/MAPK/ERK cascade to promote cell proliferation (By similarity). Plays an essential role in cardiac development; required for normal formation of the endocardial cushion and ventricular trabeculation during embryogenesis (PubMed:9362461). Critical for peripheral nervous system development, where neuregulin- 1/ERBB3 signaling drives Schwann cell survival, proliferation, and differentiation, and is required for axonal myelination (PubMed:9338783). Involved in epithelial morphogenesis and mammary gland development (PubMed:19019207). Also involved in the regulation of myeloid cell differentiation. Participates in a regulatory feedback loop whereby pathway activation induces transcriptional up-regulation of ERBB3 expression. Participates in vesicular sorting by stabilizing the ARF6-GGA3-RABEP1 endosomal sorting complex, to promote early recycling of TFRC and ITGB1. May also be activated by additional ligands including CSPG5 and EGFL6; the latter triggers assembly of an ERBB2/ERBB3/ITGB3 signaling complex leading to ERK phosphorylation and cell proliferation (By similarity).
Cellular Location	Membrane; Single-pass type I membrane protein
Tissue Location	In the muscle, expression localizes to the synaptic sites of muscle fibers

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