Recombinant ERBB4 protein (His tag)

Catalog Number	542712
Synonyms	Proto-oncogene-like protein c-ErbB-4; Tyrosine kinase-type cell surface receptor HER4; p180erbB4; 4ICD; E4ICD; s80HER4
Species	Human
Expression System	E. coli
Accession	Q15303
Molecular Weight	Predictes a molecular mass of 37.45 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 40 kDa band.

Product Information

Sequence Region	711-1022
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 711-1022 aa (Q15303) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	This high-purity recombinant protein corresponds to amino acids 711-1022 of human Receptor tyrosine-protein kinase erbB-4 (ERBB4), encompassing the complete protein kinase domain. This fragment serves as an essential tool for investigating the catalytic activity, phosphorylation mechanisms, and signaling functions of ERBB4 in cardiac, neural, and mammary gland development, as well as in cellular processes such as proliferation, differentiation, and apoptosis. ERBB4 is a tyrosine-protein kinase that functions as a cell surface receptor for neuregulins and EGF family members, including NRG1-4, BTC, EREG, and HBEGF. It plays critical roles in heart, central nervous system, and mammary gland development, regulating gene transcription, cell proliferation, differentiation, migration, and apoptosis. Ligand binding induces receptor dimerization, autophosphorylation, and activation of downstream pathways such as MAPK and PI3K-AKT, with isoform-specific effects on cell migration and survival. Proteolytic processing generates soluble intracellular domains (4ICD) that translocate to the nucleus or mitochondria, influencing STAT5A-mediated transcription and apoptosis. The full-length protein is a single-pass type I membrane protein, and its activated form may internalize upon NRG1 stimulation. The provided fragment (711-1022) contains the protein kinase domain, enabling focused studies on ERBB4's catalytic functions and their implications in development and disease.