Recombinant ACV1C protein (His tag)

Catalog Number	545478
Synonyms	Activin receptor type IC; ACTR-IC; Activin receptor-like kinase 7; ALK-7
Species	Human
Expression System	E. coli
Accession	Q8NER5
Molecular Weight	Predictes a molecular mass of 36.29 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 37 kDa band.

Product Information

Sequence Region	190-493
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, 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 190-493 aa (Q8NER5) 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	Recombinant Human Activin Receptor Type-1C (ACVR1C) Kinase Domain Fragment (residues 190-493) is a high-purity protein designed for studying serine/threonine kinase activity and receptor signaling. This fragment fully encompasses the functional protein kinase domain, making it an ideal tool for investigating activin and NODAL signaling pathways, SMAD regulation, and kinase function in cellular processes. Activin receptor type-1C (ACVR1C) is a transmembrane serine/threonine protein kinase that forms receptor complexes upon ligand binding. It functions as a receptor for activin AB, activin B, activin E, and NODAL, mediating phosphorylation and activation of SMAD transcriptional regulators SMAD2 and SMAD3. The receptor plays critical roles in cellular signaling, including increased apoptosis and reduced proliferation through suppression of AKT signaling and activation of Smad2-dependent pathways in pancreatic beta-cells, trophoblasts, and epithelial or neuronal cells. ACVR1C also acts as a positive regulator for macrophage activation through down-regulation of PPARG expression. The full-length protein is localized to the membrane as a single-pass type I membrane protein, where it participates in key developmental and regulatory processes.