Recombinant DAND5 protein (His tag)

Catalog Number	540757
Synonyms	Cerberus-like protein 2; Cerl-2; Cysteine knot superfamily 1, BMP antagonist 3; Gremlin-3
Species	Human
Expression System	E. coli
Accession	Q8N907
Molecular Weight	Predictes a molecular mass of 12.62 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 13 kDa band.

Product Information

Sequence Region	90-189
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, 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 90-189 aa (Q8N907) 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 DAND5 (Cerberus-like protein 2) Fragment (aa 90-189) is a high-purity protein designed for studying the CTCK functional domain. This fragment serves as a key tool for investigating NODAL, BMP, and TGF-beta signaling antagonism, left-right patterning, and angiogenesis regulation in developmental and cellular research. DAN domain family member 5 (DAND5), also known as Cerberus-like protein 2 or Gremlin-3, is a secreted protein that functions as an antagonist of NODAL signaling, essential for proper left-right axis establishment during embryonic development. It additionally inhibits BMP and TGF-beta signaling pathways and plays a role in heart development. Beyond embryogenesis, DAND5 exhibits anti-angiogenic activity by suppressing endothelial cell sprouting, migration, and proliferation, potentially through internalization and modulation of cellular redox and glycolytic balance. The protein is secreted but may be internalized by endothelial cells and localized to mitochondria, highlighting its dynamic role in extracellular signaling and intracellular metabolic regulation.