Recombinant HAND2 protein (His tag)

Catalog Number	544749
Synonyms	Class A basic helix-loop-helix protein 26; bHLHa26; Deciduum, heart, autonomic nervous system and neural crest derivatives-expressed protein 2; dHAND
Species	Human
Expression System	E. coli
Accession	P61296
Molecular Weight	Predictes a molecular mass of 15.23 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 16 kDa band.

Product Information

Sequence Region	100-217
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 100-217 aa (P61296) 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	Introducing the recombinant HAND2 protein fragment (residues 100-217), a highly stable and soluble unit derived from the essential human transcription factor Heart- and neural crest derivatives-expressed protein 2. This fragment is expertly engineered for structural and biochemical studies, enabling researchers to explore the mechanisms of cardiac and limb development with precision. The full-length HAND2 protein, encoded by the HAND2 gene in Homo sapiens (UniProt ID: P61296), is a nucleus-localized transcription factor critical for embryonic development. It plays a vital role in cardiac morphogenesis, particularly in forming the right ventricle and aortic arch arteries, and is essential for vascular development and angiogenesis, potentially via VEGF signaling pathways. HAND2 also regulates limb development by establishing anterior-posterior polarization and inducing sonic hedgehog (SHH) expression, and it contributes to branchial arch development, which supports head and neck structure formation. Its function involves binding to E-box DNA sequences (5'-CANNTG-3'), underscoring its importance in gene regulation during development.