Recombinant HMX3 protein (His tag)

Catalog Number	548883
Synonyms	Homeobox protein H6 family member 3; Homeobox protein Nkx-5.1
Species	Human
Expression System	E. coli
Accession	A6NHT5
Molecular Weight	Predictes a molecular mass of 10.15 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 10 kDa band.

Product Information

Sequence Region	227-299
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 227-299 aa (A6NHT5) 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 recombinant protein product features a stable and soluble fragment (residues 227-299) of the human Homeobox protein HMX3, a transcription factor critical for neuronal specification and development of the inner ear and hypothalamus. Designed for structural and biochemical studies, this fragment offers a practical tool for researchers investigating HMX3's functional mechanisms. HMX3, also known as Homeobox protein Nkx-5.1, is a transcription factor that binds to the 5'-CAAGTG-3' DNA core sequence and plays essential roles in neuronal cell type specification, inner ear development (particularly semicircular canal formation), and the establishment of the hypothalamic/pituitary axis in the central nervous system. The protein localizes to the nucleus, consistent with its function in transcriptional regulation. The provided fragment was selected computationally to ensure stability and solubility, enabling detailed molecular analyses without the full-length protein's complexity.