Recombinant TBX2 protein (His tag)

Catalog Number	544903
Synonyms	T-box protein 2
Species	Human
Expression System	E. coli
Accession	Q13207
Molecular Weight	Predictes a molecular mass of 23.34 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 23 kDa band.

Product Information

Sequence Region	103-288
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 103-288 aa (Q13207) 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 T-box transcription factor TBX2 (T-box protein 2) Fragment (aa 103-288) is a high-purity, stable protein designed for structural and biochemical studies. This 186-amino acid fragment retains key functional properties, offering researchers a soluble and reliable tool for investigating TBX2's role as a transcriptional regulator in development and disease. TBX2 is a crucial transcription factor in Homo sapiens that primarily functions as a transcriptional repressor, though it may also act as an activator. It binds to specific T-site DNA sequences and plays essential roles in cardiac atrioventricular canal formation, limb patterning, branching morphogenesis in lungs and mammary glands, and inner ear development. TBX2 regulates cellular processes including proliferation, senescence, epithelial-mesenchymal transition, and melanogenesis by modulating genes such as CDKN1A, CDKN2A, CDH1, ADAM10, and TGFB2. It localizes to the nucleus, where it interacts with partners like NKX2.5 and HDAC1 to fine-tune gene expression during development and in response to cellular stress.