Recombinant TWST2 protein (His tag)

Catalog Number	543268
Synonyms	Class A basic helix-loop-helix protein 39; bHLHa39; Dermis-expressed protein 1; Dermo-1
Species	Human
Expression System	E. coli
Accession	Q8WVJ9
Molecular Weight	Predictes a molecular mass of 13.59 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 14 kDa band.

Product Information

Sequence Region	58-160
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 58-160 aa (Q8WVJ9) 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 is a fragment of human Twist-related protein 2 (TWIST2), encompassing amino acids 58-160. It includes the complete basic helix-loop-helix (bHLH) domain, making it an ideal tool for studying DNA binding, dimerization, and transcriptional regulation mechanisms in developmental and metabolic research. Twist-related protein 2 (TWIST2) is a Class A basic helix-loop-helix transcription factor that binds E-box sequences (5'-CANNTG-3') as a heterodimer. It functions as a transcriptional repressor, inhibiting the activity of key regulators like MYOD1, MYOG, MEF2A, and MEF2C, and plays a role in preventing premature osteoblast differentiation during bone development. TWIST2 also represses pro-inflammatory cytokines such as TNF-α and IL-1β and is involved in postnatal glycogen storage and energy metabolism. The protein localizes primarily to the nucleus during embryonic development but is found in the cytoplasm in adult tissues, indicating dynamic regulation of its activity. The provided fragment (58-160) contains the critical bHLH domain, enabling focused studies on its DNA-binding and regulatory functions.