Recombinant ID2 protein (His tag)

Catalog Number	542542
Synonyms	Class B basic helix-loop-helix protein 26; bHLHb26; Inhibitor of DNA binding 2; Inhibitor of differentiation 2
Species	Human
Expression System	E. coli
Accession	Q02363
Molecular Weight	Predictes a molecular mass of 10.98 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 11 kDa band.

Product Information

Sequence Region	1-82
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 1-82 aa (Q02363) 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 DNA-binding protein inhibitor ID-2 (bHLHb26) fragment (amino acids 1-82), encompassing the full bHLH domain. This high-purity fragment is an essential tool for investigating the mechanisms of transcriptional regulation, cellular differentiation, and circadian clock control, offering researchers a targeted approach to study domain-specific functions without interference from other protein regions. DNA-binding protein inhibitor ID-2 is a transcriptional regulator that negatively modulates basic helix-loop-helix (bHLH) transcription factors by forming heterodimers, thereby inhibiting DNA binding and transcriptional activity. It plays critical roles in diverse cellular processes, including growth, differentiation, apoptosis, angiogenesis, and neoplastic transformation. ID-2 is notably involved in repressing skeletal muscle and cardiac myocyte differentiation and regulating the circadian clock by suppressing CLOCK-BMAL1 heterodimer activity and influencing photic entrainment and lipid metabolism-related gene expression. The protein localizes to both the cytoplasm and nucleus, facilitating its regulatory functions in input and output pathways of circadian rhythms and other key biological systems.