Recombinant ID1 protein (His tag)

Catalog Number	546960
Synonyms	Class B basic helix-loop-helix protein 24; bHLHb24; Inhibitor of DNA binding 1; Inhibitor of differentiation 1
Species	Human
Expression System	E. coli
Accession	P41134
Molecular Weight	Predictes a molecular mass of 11.97 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 12 kDa band.

Product Information

Sequence Region	62-155
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 62-155 aa (P41134) 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 62-155) of the human DNA-binding protein inhibitor ID-1, a key transcriptional regulator implicated in cellular differentiation, growth, and circadian rhythm control. Designed for structural and biochemical studies, this fragment offers researchers a reliable tool to investigate ID-1's inhibitory mechanisms without the complexities of the full-length protein. DNA-binding protein inhibitor ID-1 (UniProt ID: P41134), also known as Class B basic helix-loop-helix protein 24 (bHLHb24), is a transcriptional regulator that lacks a basic DNA-binding domain. It functions by forming heterodimers with basic helix-loop-helix (bHLH) transcription factors, thereby inhibiting their DNA binding and transcriptional activity. ID-1 is involved in diverse cellular processes, including growth, senescence, differentiation, apoptosis, angiogenesis, and neoplastic transformation. It notably inhibits skeletal muscle and cardiac myocyte differentiation and plays a role in regulating the circadian clock by repressing the CLOCK-BMAL1 heterodimer. The protein localizes to both the cytoplasm and nucleus, underscoring its dynamic regulatory roles in cellular signaling pathways.