重组人ID3蛋白

Recombinant ID3 protein (His tag)

目录号 Catalog Number	540165
同用名 Synonyms	Class B basic helix-loop-helix protein 25; bHLHb25; Helix-loop-helix protein HEIR-1; ID-like protein inhibitor HLH 1R21; Inhibitor of DNA binding 3; Inhibitor of differentiation 3
种属 Species	Human
表达系统 Expression System	E. coli
蛋白编号 Accession	Q02535
分子量 Molecular Weight	Predictes a molecular mass of 10.70 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 11 kDa band.

产品信息

氨基酸序列 Amino Acid Sequence	MKALSPVRGC YEAVCCLSER SLAIARGRGK GPAAEEPLSL LDDMNHCYSR LRELVPGVPR GTQLSQVEIL QRVIDYILDL QVVLAEPALE HHHHHH
性状 Form	冻干粉末 Lyophilized powder
组分 Formulation	Lyophilized from sterile PBS, pH 7.4
纯度 Purity	>85%, by SDS-PAGE with Coomassie Brilliant Blue staining.
内毒素 Endotoxin	Not tested.
活性 Activity	Not tested.
稳定性 Stability	Samples are stable for up to twelve months from date of receipt at -70℃
蛋白构建 Protein Construction	DNA encoding 1-88 aa (Q02535) were fused with C-terminal 6His tag.

保存与运输

复溶 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.
储存 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.
运输 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.

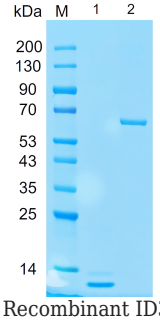
功能描述

研究背景 Background

Recombinant Human ID3 (1-88) Fragment - A high-purity recombinant protein fragment encompassing the complete bHLH domain of DNA-binding protein inhibitor ID-3. This fragment serves as an essential tool for studying the molecular mechanisms of transcriptional regulation, cellular differentiation, and circadian rhythm control without the confounding effects of the full-length protein. DNA-binding protein inhibitor ID-3 (Inhibitor of Differentiation 3) is a key transcriptional regulator that functions as a dominant-negative inhibitor of basic helix-loop-helix (bHLH) transcription factors. By forming heterodimers with bHLH proteins, ID3 prevents their DNA binding and transcriptional activity, thereby influencing critical cellular processes including growth, differentiation, apoptosis, angiogenesis, and neoplastic transformation. The protein plays a significant role in myogenesis by inhibiting skeletal muscle and cardiac myocyte differentiation while promoting muscle precursor cell proliferation. Additionally, ID3 regulates the circadian clock by repressing the transcriptional activity of the CLOCK-BMAL1 heterodimer. As a nuclear protein, ID3 exerts its regulatory functions within the nucleus, making it a central player in developmental and cellular regulatory pathways.

验证数据

SDS-PAGE



Recombinant ID3 protein (His tag) SDS-PAGE
M: Marker; Lane 1: ID3; Lane 2: BSA