Recombinant BHE41 protein (His tag)

Catalog Number	548192
Synonyms	bHLHe41; Class B basic helix-loop-helix protein 3; bHLHb3; Differentially expressed in chondrocytes protein 2; hDEC2; Enhancer-of-split and hairy-related protein 1; SHARP-1
Species	Human
Expression System	E. coli
Accession	Q9C0J9
Molecular Weight	Predictes a molecular mass of 16.57 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 17 kDa band.

Product Information

Sequence Region	44-172
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 44-172 aa (Q9C0J9) 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 129-amino acid fragment (residues 44-172) of the human Class E basic helix-loop-helix protein 41 (BHLHE41), encompassing the complete bHLH and Orange functional domains. This fragment serves as an essential tool for investigating the specific molecular mechanisms of transcriptional repression and circadian rhythm regulation mediated by these domains. The full-length BHLHE41 protein functions as a transcriptional repressor that plays a critical role in regulating circadian rhythms by negatively modulating the activity of clock genes and clock-controlled genes. It operates within the DEC autoregulatory feedback loop, repressing the CLOCK-BMAL1 heterodimer through competitive binding to E-box elements (5'-CACGTG-3') in target gene promoters. BHLHE41 also acts as a corepressor for nuclear receptors including RXR and RXR-LXR heterodimers, and inhibits HNF1A-mediated transactivation of cytochrome P450 genes. The protein is localized to the nucleus, consistent with its function as a DNA-binding transcriptional regulator.