Recombinant BHE22 protein (His tag)

Catalog Number	549030
Synonyms	bHLHe22; Class B basic helix-loop-helix protein 5; bHLHb5; Trinucleotide repeat-containing gene 20 protein
Species	Human
Expression System	E. coli
Accession	Q8NFJ8
Molecular Weight	Predictes a molecular mass of 10.91 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 11 kDa band.

Product Information

Sequence Region	236-315
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 236-315 aa (Q8NFJ8) 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 BHLHE22 bHLH Domain Fragment (aa 236-315) – a high-purity, functional protein fragment designed for studying the DNA-binding inhibition and transcriptional repressor activities of the Class E basic helix-loop-helix protein 22. This fragment fully encompasses the conserved bHLH domain, making it an ideal tool for investigating neural development, neuronal differentiation, and area-specific identity regulation in research applications. BHLHE22 (Class E basic helix-loop-helix protein 22) is a nucleus-localized transcription factor that acts as a potent repressor of Neurod1 and Myod-responsive genes by inhibiting DNA binding of TCF3/E47 homodimers and TCF3/NEUROD1 heterodimers, primarily through heterodimerization with class A bHLH factors. It plays critical roles in brain development, including regulating postmitotic acquisition of area identities during neocortical arealization, and is essential for the survival of inhibitory neurons in the spinal cord dorsal horn involved in pruritis regulation. In retinogenesis, BHLHE22 contributes to the specification of amacrine and bipolar cell subtypes and forms a transcriptional repressor complex with PRDM8 to control neural development and differentiation pathways.