Recombinant NPAS1 protein (His tag)

Catalog Number	548827
Synonyms	Neuronal PAS1; Basic-helix-loop-helix-PAS protein MOP5; Class E basic helix-loop-helix protein 11; bHLHe11; Member of PAS protein 5; PAS domain-containing protein 5
Species	Human
Expression System	E. coli
Accession	Q99742
Molecular Weight	Predictes a molecular mass of 21.30 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 21 kDa band.

Product Information

Sequence Region	243-421
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 243-421 aa (Q99742) 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 product is a high-quality recombinant fragment of Neuronal PAS domain-containing protein 1 (NPAS1), spanning residues 243-421. It fully encompasses the functional PAS 2 and PAC domains, making it an ideal tool for investigating domain-specific functions in neurological regulatory pathways and hypoxia response mechanisms. Neuronal PAS domain-containing protein 1 (NPAS1) is a transcription factor implicated in regulatory pathways relevant to schizophrenia and psychotic illness. It plays a role in late central nervous system development by modulating erythropoietin (EPO) expression in response to cellular oxygen levels. NPAS1 forms heterodimers that bind to the hypoxia response element (HRE) core sequence 5'-TACGTG-3', leading to transcriptional repression of target genes such as tyrosine hydroxylase (TH). The protein is localized to the nucleus, where it exerts its regulatory functions. This recombinant fragment provides a focused resource for studying the specific contributions of the PAS 2 and PAC domains to NPAS1's biological activities.