Recombinant PHF12 protein (His tag)

Catalog Number	543425
Synonyms	PHD factor 1; Pf1
Species	Human
Expression System	E. coli
Accession	Q96QT6
Molecular Weight	Predictes a molecular mass of 20.65 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 21 kDa band.

Product Information

Sequence Region	793-965
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 793-965 aa (Q96QT6) 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 Human PHD finger protein 12 (PHF12) Fragment (aa 793-965) - A precisely engineered protein fragment containing the complete FHA domain, designed as an essential tool for studying transcriptional repression mechanisms and chromatin remodeling processes in human cells. PHD finger protein 12 (PHF12) functions as a critical transcriptional repressor and key scaffolding subunit of SIN3 complexes, which play a fundamental role in chromatin regulation. This protein contributes to complex assembly by contacting each core subunit domain, stabilizes the complex structure, and serves as the substrate receptor by recruiting the H3 histone tail. The SIN3B complex, containing PHF12, represses transcription and counteracts histone acetyltransferase activity through recognition of H3K27ac marks and the enzymatic activity of histone deacetylase HDAC2. Located exclusively in the nucleus, PHF12 is recruited downstream of constitutively active genes' transcriptional start sites, where it mitigates histone acetylation and regulates RNA polymerase II progression within transcribed regions. The protein may also function in SIN3A-independent transcriptional repression through recruitment of TLE5 complexes and potentially plays a role in ribosomal biogenesis.