Recombinant SIN3A protein (His tag)

Catalog Number	541079
Synonyms	Histone deacetylase complex subunit Sin3a; Transcriptional corepressor Sin3a
Species	Human
Expression System	E. coli
Accession	Q96ST3
Molecular Weight	Predictes a molecular mass of 44.76 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 48 kDa band.

Product Information

Sequence Region	462-831
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, 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 462-831 aa (Q96ST3) 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 SIN3A (462-831) Fragment - a highly stable and soluble 370-amino acid fragment of the Paired amphipathic helix protein Sin3a, specifically engineered for structural biology and biochemical studies. This purified fragment represents a computationally optimized region of the transcriptional corepressor Sin3a, providing researchers with a reliable tool for investigating chromatin remodeling and gene regulation mechanisms. The full-length Paired amphipathic helix protein Sin3a (Histone deacetylase complex subunit Sin3a) functions as a crucial transcriptional repressor in human cells. It serves as a corepressor for REST and interacts with multiple partners including MXI1 to repress MYC-responsive genes, thereby antagonizing MYC oncogenic activities. SIN3A also forms complexes with MXD1-MAX heterodimers to repress transcription through DNA tethering mechanisms. The protein cooperates with OGT to mediate transcriptional repression in parallel with histone deacetylation pathways and plays essential roles in circadian rhythm regulation by repressing circadian target genes like PER1 through histone deacetylation within the large PER complex. Additionally, SIN3A cooperates with FOXK1 to regulate cell cycle progression and is required for proper cortical neuron differentiation and callosal axon elongation. The protein localizes primarily to the nucleus, with specific recruitment to nucleoli mediated by SAP30L, highlighting its central role in nuclear organization and gene expression control.