Recombinant SET protein (His tag)

Catalog Number	540158
Synonyms	HLA-DR-associated protein II; Inhibitor of granzyme A-activated DNase; IGAAD; PHAPII; Phosphatase 2A inhibitor I2PP2A; I-2PP2A; Template-activating factor I; TAF-I
Species	Human
Expression System	E. coli
Accession	Q01105
Molecular Weight	Predictes a molecular mass of 25.36 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 30 kDa band.

Product Information

Sequence Region	37-237
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 37-237 aa (Q01105) 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 SET Protein Fragment (37-237) is a highly stable and soluble 201-amino acid construct derived from the multifunctional SET protein, also known as HLA-DR-associated protein II or IGAAD. This fragment is optimized for structural and biochemical studies, offering researchers a reliable tool to investigate SET's roles in apoptosis regulation, histone chaperoning, and transcriptional control without the complexities of the full-length protein. The full-length SET protein is a multitasking human protein involved in critical cellular processes including apoptosis, transcription regulation, nucleosome assembly, and histone chaperoning. It functions as an inhibitor of granzyme A-activated DNase (NME1), playing a key role in cytotoxic T-lymphocyte-induced apoptosis, where granzyme A cleavage disrupts SET's binding to NME1, releasing DNase inhibition. SET also acts as a potent inhibitor of protein phosphatase 2A and histone acetyltransferases EP300/CREBBP and PCAF, particularly targeting histone H4 acetylation, which leads to transcriptional silencing and prevents active DNA demethylation. Cellular localization studies show SET is primarily found in the cytoplasm (both cytosol and endoplasmic reticulum-associated) and translocates to the nucleoplasm following CTL attack, avoiding the nucleolus. The protein's complex functional repertoire makes it a significant target for research in cell death pathways, epigenetic regulation, and viral replication mechanisms.