Recombinant MPP8 protein (His tag)

Catalog Number	543450
Synonyms	Two hybrid-associated protein 3 with RanBPM; Twa3
Species	Human
Expression System	E. coli
Accession	Q99549
Molecular Weight	Predictes a molecular mass of 37.04 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 37 kDa band.

Product Information

Sequence Region	540-860
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 540-860 aa (Q99549) 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 M-phase phosphoprotein 8 (MPHOSPH8) Fragment (aa 540-860): A high-quality, stable protein fragment designed for structural and biochemical studies. This soluble unit enables researchers to investigate the protein's role in epigenetic regulation, specifically its interaction with methylated histone H3 (H3K9me) and recruitment of repressive complexes. M-phase phosphoprotein 8 (MPHOSPH8), also known as Twa3, is a heterochromatin component that recognizes and binds methylated 'Lys-9' of histone H3 (H3K9me), facilitating epigenetic repression. It recruits the HUSH complex to H3K9me3-rich genomic loci, promoting transcriptional silencing through SETDB1-mediated H3K9me3 deposition and MORC2 involvement. Additionally, MPHOSPH8 binds H3K9me to recruit DNMT3A for DNA methylation at target CpG sites, contributing to gene down-regulation, such as CDH1. It also represses L1 retrotransposons and collaborates in silencing unintegrated retroviral DNA. Localized in the nucleus and chromosomes, MPHOSPH8 is detected on heterochromatin and nucleosomes, dissociating during interphase and early mitosis, underscoring its critical role in maintaining epigenetic integrity and gene expression control.