Recombinant MBD5 protein (His tag)

Catalog Number	546138
Synonyms	Methyl-CpG-binding protein MBD5
Species	Human
Expression System	E. coli
Accession	Q9P267
Molecular Weight	Predictes a molecular mass of 14.04 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 14 kDa band.

Product Information

Sequence Region	1-115
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, 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 1-115 aa (Q9P267) 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 Methyl-CpG-binding domain protein 5 (MBD5) fragment (amino acids 1-115), encompassing the complete MBD domain. This high-purity protein is an essential tool for investigating chromatin regulation, epigenetic mechanisms, and the specific functional roles of the MBD domain in gene expression control. Methyl-CpG-binding domain protein 5 (MBD5) is a non-catalytic component of the polycomb repressive deubiquitinase (PR-DUB) complex, which specifically mediates deubiquitination of histone H2A monoubiquitinated at Lys-120 (H2AK119ub1). MBD5 is crucial for maintaining PR-DUB complex stability and stimulating its deubiquitinase activity. As part of this complex, it associates with chromatin regions enriched in histone marks H3K4me1, H3K4me3, and H3K27Ac, but not H3K27me3. The PR-DUB complex serves as a key epigenetic regulator of genes involved in development, cell communication, signaling, proliferation, and viability. MBD5 localizes to the nucleus and associates with heterochromatin in a DNA methylation-independent manner, distinguishing it from other methyl-CpG-binding proteins. Different MBD5-containing complexes associate with distinct chromatin regions, regulating diverse cellular pathways.