Recombinant MBD2 protein (His tag)

Catalog Number	546151
Synonyms	Demethylase; DMTase; Methyl-CpG-binding protein MBD2
Species	Human
Expression System	E. coli
Accession	Q9UBB5
Molecular Weight	Predictes a molecular mass of 18.73 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 20 kDa band.

Product Information

Sequence Region	257-411
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 257-411 aa (Q9UBB5) 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 2 (MBD2) fragment (residues 257-411) is a highly stable and soluble protein unit ideal for structural and biochemical studies. This fragment, derived from the full-length protein involved in epigenetic regulation, offers researchers a reliable tool to investigate chromatin remodeling and gene silencing mechanisms. Methyl-CpG-binding domain protein 2 (MBD2) is a key epigenetic regulator in humans that binds to methylated CpG islands in DNA promoters, including hemimethylated DNA. It functions as a transcriptional repressor by recruiting histone deacetylases and DNA methyltransferases to chromatin, facilitating gene silencing. As a component of the NuRD complex, MBD2 contributes to chromatin remodeling and acts as a scaffold to target GATAD2A and GATAD2B for repression. It also localizes to the nucleus and chromosomes, particularly at replication foci in late S phase and sites of DNA damage, underscoring its role in maintaining epigenetic integrity and responding to genomic stress.