Recombinant MBD3 protein (His tag)

Catalog Number	546619
Synonyms	Methyl-CpG-binding protein MBD3
Species	Human
Expression System	E. coli
Accession	O95983
Molecular Weight	Predictes a molecular mass of 18.56 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 19 kDa band.

Product Information

Sequence Region	105-257
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 105-257 aa (O95983) 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 3 (MBD3) fragment (amino acids 105-257) is a highly purified protein preparation ideal for chromatin remodeling and gene regulation studies. This 153-amino acid fragment represents a stable, soluble unit of MBD3, optimized for structural and biochemical applications in epigenetic research. Methyl-CpG-binding domain protein 3 (MBD3) functions as a critical component of the histone deacetylase NuRD complex, playing a central role in chromatin remodeling and transcriptional repression. Unlike other MBD family members, MBD3 does not bind methylated DNA independently but shows preferential binding to unmethylated CpG dinucleotides. The protein operates primarily in the nucleus, localized to discrete foci and chromatin regions, particularly at promoter regions of active genes. MBD3 serves as a key recruiter of histone deacetylases and DNA methyltransferases, contributing to gene silencing mechanisms and epigenetic regulation. Its involvement in the NuRD complex makes it essential for understanding chromatin dynamics and gene expression control in various cellular processes.