

Recombinant MBD1-MBD protein

Catalog No: 81471, 81571

Expressed In: *E. coli*

Quantity: 50, 1000 µg

Concentration: 0.6 µg/µl

Source: Human

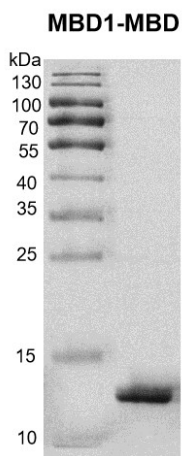
Buffer Contents: Recombinant MBD1-MBD protein is supplied in 25 mM Tris 8.0, 300mM NaCl, 20% glycerol, 0.5 mM TCEP.

Background: MBD1 (Methyl-CpG-binding domain protein 1) is a transcriptional repressor that binds CpG islands in promoters where the DNA is methylated at position 5 of cytosine within CpG dinucleotides. Binding is abolished by the presence of 7-mG that is produced by DNA damage by methylmethanesulfonate (MMS). Acts as transcriptional repressor and plays a role in gene silencing by recruiting ATF7IP, which in turn recruits factors such as the histone methyltransferase SETDB1. Probably forms a complex with SETDB1 and ATF7IP that represses transcription and couples DNA methylation and histone 'Lys-9' trimethylation. Isoform 1 and isoform 2 can also repress transcription from unmethylated promoters.

Protein Details: Recombinant MBD1-MBD protein that includes amino acids 1-70 of human MBD1 protein (accession number NP_056671.2) was expressed in *E. coli* cells with an N-terminal 6xHis tag. The molecular weight of the protein is 10.11 kDa.

Application Notes: This product was manufactured as described in Protein Details. Where possible, Active Motif has developed functional or activity assays for recombinant proteins. Additional characterization such as enzyme kinetic activity assays, inhibitor screening or other biological activity assays may not have been performed for every product. All available data for a given product is shown on the lot-specific Technical Data Sheet.

Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is for research use only and is not for use in diagnostic procedures. This product is guaranteed for 6 months from date of arrival.

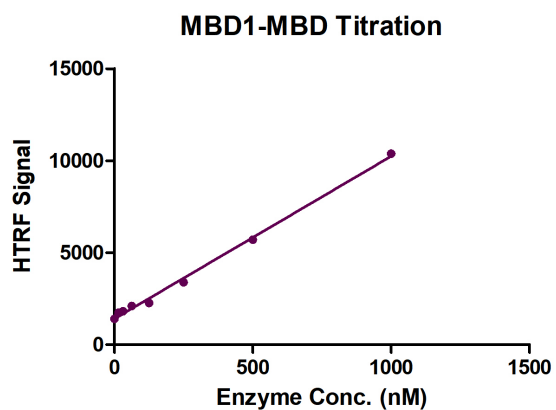


Recombinant MRM1-MBD protein

12.5% SDS-PAGE gel stained with Coomassie Blue.

MW: 10.11 kDa

Purity: >95%



HTRF assay for Recombinant MBD1-MBD protein activity

1 μ M substrate DNA (5'-Biotin-GCAGCCGG/5mC/GCGAATC-3') were incubated with different concentrations of MBD1-MBD protein in HTRF binding buffer contain 50mM HEPES-NaOH pH 7.4, 0.1% BSA for 1 hour, Then 10 μ l detection reagents contain anti-His antibody (1:100) and SA-XL665 (1:100) diluted with 1 \times Detection Buffer were added and incubated for 30 min. All the operations and reactions were performed at room temperature. HTRF assay was used for detection.