

Recombinant MBD3 protein

Catalog No: 82177, 82777

Expressed In: Baculovirus

Quantity: 20, 1000 µg

Source: Human

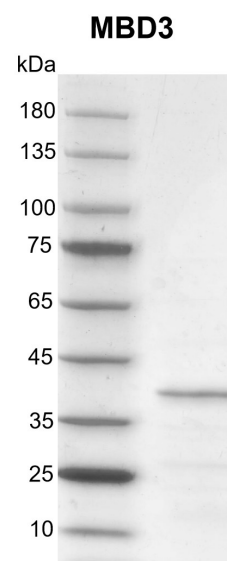
Buffer Contents: Recombinant MBD3 protein is supplied in 25 mM HEPES pH 7.5, 300 mM NaCl, 20% glycerol, 0.04% Triton X-100, 0.5 mM TCEP.

Background: Recombinant human **MBD3** (methyl-CpG-binding domain protein 3), also known by its gene symbol **MBD3** and alternative names including methyl-CpG-binding protein **MBD3**, is a core subunit of the nucleosome remodeling and deacetylase (NuRD) complex that plays a critical role in chromatin remodeling and transcriptional regulation. Unlike other family members, **MBD3** lacks the ability to bind methylated DNA due to amino acid substitutions in its methyl-CpG-binding domain, but instead contributes to NuRD complex integrity and function through protein-protein interactions that facilitate chromatin compaction and gene silencing. This recombinant form, typically produced in expression systems such as E. coli or insect cells, retains the key biochemical properties of the native protein, including its ability to interact with other NuRD complex components such as HDACs and CHD proteins to coordinate histone deacetylase activity and ATP-dependent chromatin remodeling. **MBD3** is essential for embryonic development, stem cell pluripotency maintenance, and lineage commitment, functioning as a key regulator of gene expression programs by mediating NuRD complex recruitment to specific genomic loci and influencing diverse biological processes including hematopoiesis, neurogenesis, and cellular reprogramming.

Protein Details: Recombinant MBD3 protein was expressed in baculovirus expression system as the full length protein (accession number NP_001268382.1) with a C-terminal FLAG tag. The molecular weight of the protein is 34.54 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 this product is shown.

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 MBD3 protein gel
4-20% SDS-PAGE gel
MW: 34.54 kDa
Purity: >90%