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KD-Validated Anti-Methyl-CpG Binding Domain Protein 2 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1606

Specification

KD-Validated Anti-Methyl-CpG Binding Domain Protein 2 Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	Q9UBB5
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 43 kDa , observed , 29,43 kDa KDa**
Gene Name	**MBD2**
Aliases	**MBD2; Methyl-CpG Binding Domain Protein 2; Methyl-CpG-Binding Domain Protein 2; Demethylase; DMTase; Methyl-CpG-Binding Protein MBD2; NY-CO-41**
Immunogen	**A synthesized peptide derived from human MBD2**

KD-Validated Anti-Methyl-CpG Binding Domain Protein 2 Rabbit Monoclonal Antibody - Additional Information

Gene ID **8932**

Other Names
Methyl-CpG-binding domain protein 2, Demethylase, DMTase, Methyl-CpG-binding protein MBD2, MBD2 (HGNC:6917)

KD-Validated Anti-Methyl-CpG Binding Domain Protein 2 Rabbit Monoclonal Antibody - Protein Information

Name MBD2 (HGNC:6917)

Function
Binds CpG islands in promoters where the DNA is methylated at position 5 of cytosine within CpG dinucleotides (PubMed:9774669). Binds hemimethylated DNA as well (PubMed:10947852, PubMed:24307175). Recruits histone deacetylases and DNA methyltransferases to chromatin (PubMed:10471499, PubMed:10947852). Acts as a component of the histone deacetylase NuRD complex which participates in the remodeling of chromatin (PubMed:16428440, PubMed:<a href="http://www.uniprot.org/citations/28977666"

target="_blank">28977666). Acts as a transcriptional repressor and plays a role in gene silencing (PubMed:10471499, PubMed:10947852, PubMed:16415179). Functions as a scaffold protein, targeting GATAD2A and GATAD2B to chromatin to promote repression (PubMed:16415179). May enhance the activation of some unmethylated cAMP-responsive promoters (PubMed:12665568).

Cellular Location
Nucleus. Chromosome Note=Nuclear, in discrete foci (PubMed:12183469). Detected at replication foci in late S phase. Localizes to methylated chromatin (PubMed:16428440). Localizes to sites of DNA damage in a manner partially dependent on ZMYND8 (PubMed:27732854)

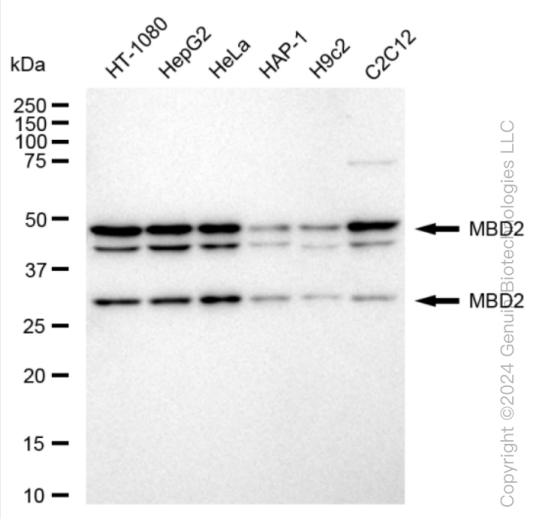
Tissue Location
Highly expressed in brain, heart, kidney, stomach, testis and placenta.

KD-Validated Anti-Methyl-CpG Binding Domain Protein 2 Rabbit Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KD-Validated Anti-Methyl-CpG Binding Domain Protein 2 Rabbit Monoclonal Antibody - Images



Western blotting analysis using anti-MBD2 antibody (Cat#62358). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-MBD2

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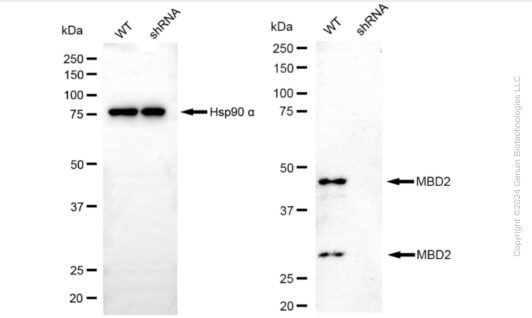
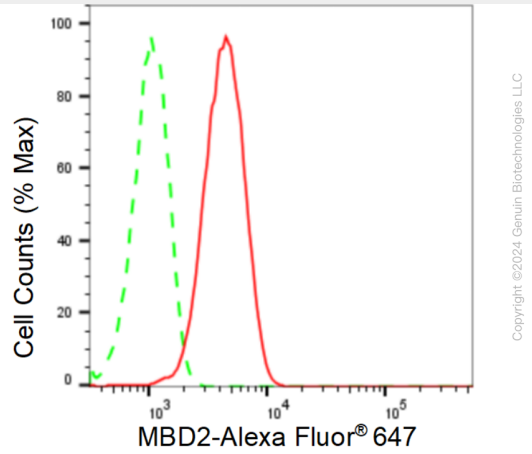
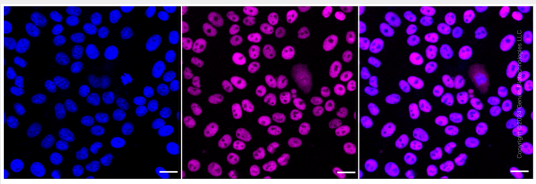
antibody (Cat#62358, 1:10,000) and HRP-conjugated goat anti-rabbit secondary antibody (Cat#201, 1:20,000) respectively. Image was developed using FeQ™ ECL Substrate Kit (Cat#226).



Western blotting analysis using anti-MBD2 antibody (Cat#62358). MBD2 expression in wild type (WT) and MBD2 shRNA knockdown (KD) HT-1080 cells with 20 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-MBD2 antibody (Cat#62358, 1:10,000) and HRP-conjugated goat anti-rabbit secondary antibody (Cat#201, 1:20,000) respectively. Image was developed using NaQ™ ECL Substrate Kit (Cat#716).



Flow cytometric analysis of MBD2 expression in HepG2 cells using MBD2 antibody (Cat#62358, 1:2,000). Green, isotype control; red, MBD2.



Immunocytochemical staining of HepG2 cells with anti-MBD2 antibody (Cat#62358, 1:1,000). Nuclei were stained blue with DAPI; MBD2 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.