10320 Camino Santa Fe, Suite G
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Tel: 858.875.1900 Fax: 858.875.1999

Goat Anti-MBD2 (isoform 1) Antibody

Peptide-affinity purified goat antibody

Catalog # AF1655a

Specification

Goat Anti-MBD2 (isoform 1) Antibody - Product Information

Application	**WB, IHC**
Primary Accession	Q9UBB5
Other Accession	NP_003918, 8932, 17191 (mouse)
Reactivity	**Human**
Predicted	**Mouse, Rat, Dog**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**43255**

Goat Anti-MBD2 (isoform 1) Antibody - Additional Information

Gene ID 8932

Other Names
Methyl-CpG-binding domain protein 2, Demethylase, DMTase, Methyl-CpG-binding protein MBD2, MBD2

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-MBD2 (isoform 1) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-MBD2 (isoform 1) 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: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.

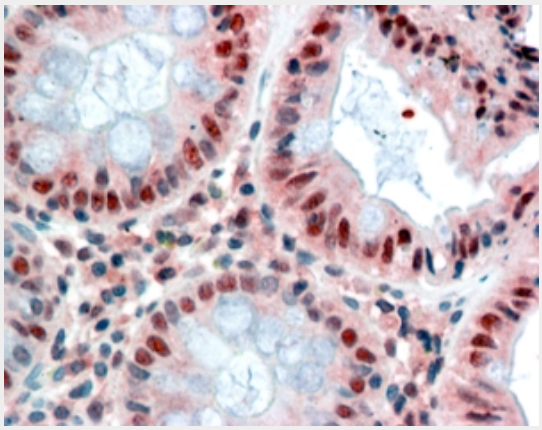
Goat Anti-MBD2 (isoform 1) Antibody - Protocols

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

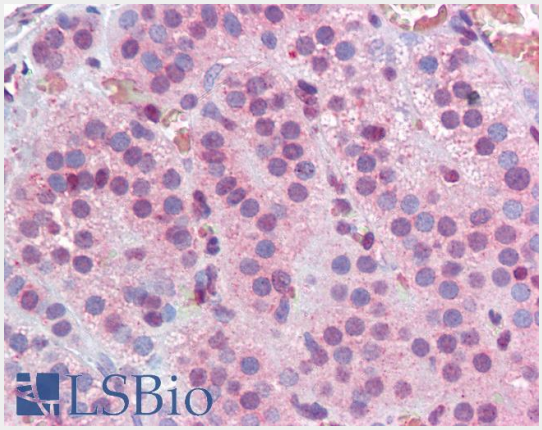
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Goat Anti-MBD2 (isoform 1) Antibody - Images

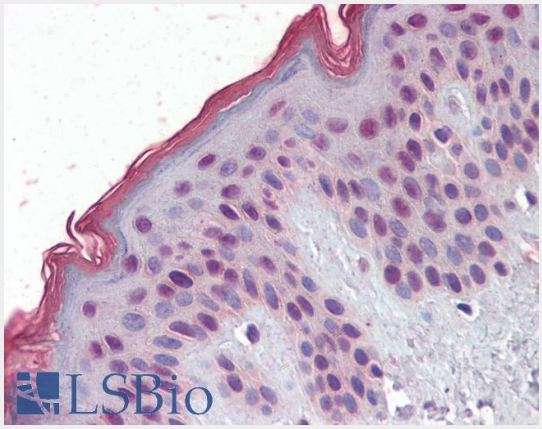
EB07538 (0.3µg/ml) staining of Jurkat cell lysate (35µg protein in RIPA buffer). Detected by chemiluminescence.



EB07538 (2.5µg/ml) staining of paraffin embedded Human Colon. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.



EB07538 (2.5µg/ml) staining of paraffin embedded Human Adrenal Gland. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.



EB07538 (2.5µg/ml) staining of paraffin embedded Human Skin. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.

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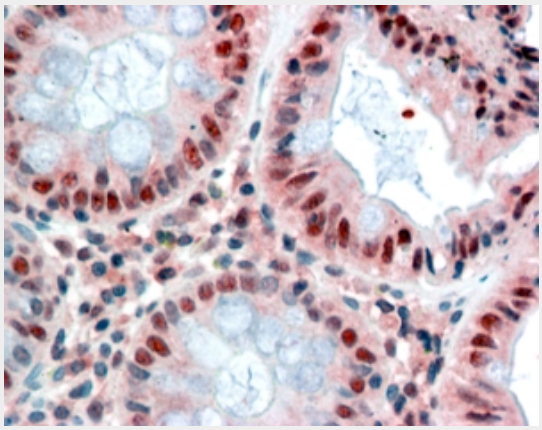
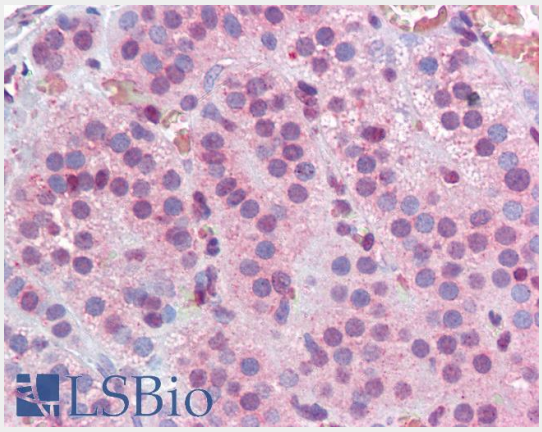


EB07538 (2.5µg/ml) staining of paraffin embedded Human Colon. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.



EB07538 (2.5µg/ml) staining of paraffin embedded Human Adrenal Gland. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.

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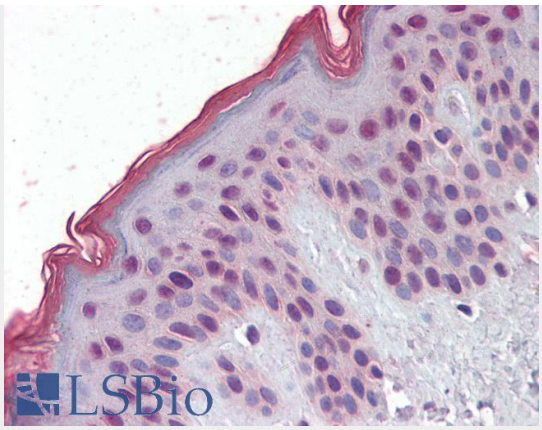

EB07538 (2.5µg/ml) staining of paraffin embedded Human Skin. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.

Goat Anti-MBD2 (isoform 1) Antibody - Background

DNA methylation is the major modification of eukaryotic genomes and plays an essential role in mammalian development. Human proteins MECP2, MBD1, MBD2, MBD3, and MBD4 comprise a family of nuclear proteins related by the presence in each of a methyl-CpG binding domain (MBD). Each of these proteins, with the exception of MBD3, is capable of binding specifically to methylated DNA. MECP2, MBD1 and MBD2 can also repress transcription from methylated gene promoters. The protein encoded by this gene may function as a mediator of the biological consequences of the methylation signal. It is also reported that the this protein functions as a demethylase to activate transcription, as DNA methylation causes gene silencing.

Goat Anti-MBD2 (isoform 1) Antibody - References

A Large-scale genetic association study of esophageal adenocarcinoma risk. Liu CY, et al. Carcinogenesis, 2010 Jul. PMID 20453000.
Genetic susceptibility to distinct bladder cancer subphenotypes. Guey LT, et al. Eur Urol, 2010 Feb. PMID 19692168.
Genetic analysis of diabetic nephropathy on chromosome 18 in African Americans: linkage analysis and dense SNP mapping. McDonough CW, et al. Hum Genet, 2009 Aug 19. PMID 19690890.
PTEN identified as important risk factor of chronic obstructive pulmonary disease. Hosgood HD 3rd, et al. Respir Med, 2009 Dec. PMID 19625176.
Polymorphisms in innate immunity genes and lung cancer risk in Xuanwei, China. Shen M, et al. Environ Mol Mutagen, 2009 May. PMID 19170196.