

ARG10737 anti-MeCP2 antibody

Package: 50 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes MeCP2
Tested Reactivity	Hu, Ms, Rat, Mk
Tested Application	ICC/IF, IHC-Fr, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	MeCP2
Species	Human
Immunogen	Synthetic peptides from aa. 471-486 of Human MeCP2.
Conjugation	Un-conjugated
Alternate Names	MRXSL; RS; MeCp2; Methyl-CpG-binding protein 2; MeCp-2 protein; RTT; AUTSX3; RTS; MRX79; PPMX; MRXS13; MRX16

Application Instructions

Application table	Application	Dilution
	ICC/IF	1:1000
	IHC-Fr	1:1000
	WB	1:1000 - 1:5000
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	

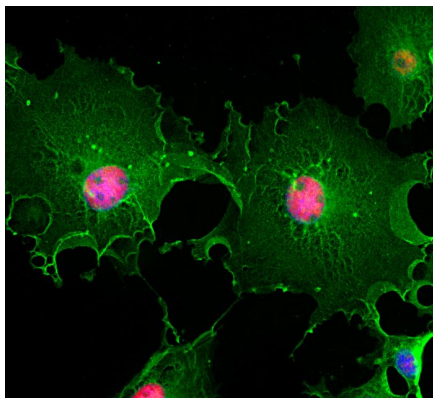
Properties

Form	Liquid
Purification	Affinity purification.
Buffer	PBS and 50% Glycerol.
Stabilizer	50% Glycerol
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	MECP2
Gene Full Name	methyl CpG binding protein 2
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. In contrast to other MBD family members, MECP2 is X-linked and subject to X inactivation. MECP2 is dispensible in stem cells, but is essential for embryonic development. MECP2 gene mutations are the cause of most cases of Rett syndrome, a progressive neurologic developmental disorder and one of the most common causes of mental retardation in females. [provided by RefSeq, Jul 2009]
Function	Chromosomal protein that binds to methylated DNA. It can bind specifically to a single methyl-CpG pair. It is not influenced by sequences flanking the methyl-CpGs. Mediates transcriptional repression through interaction with histone deacetylase and the corepressor SIN3A. Binds both 5-methylcytosine (5mC) and 5-hydroxymethylcytosine (5hmC)-containing DNA, with a preference for 5-methylcytosine (5mC). [UniProt]
Calculated Mw	52 kDa
PTM	Phosphorylated on Ser-423 in brain upon synaptic activity, which attenuates its repressor activity and seems to regulate dendritic growth and spine maturation.

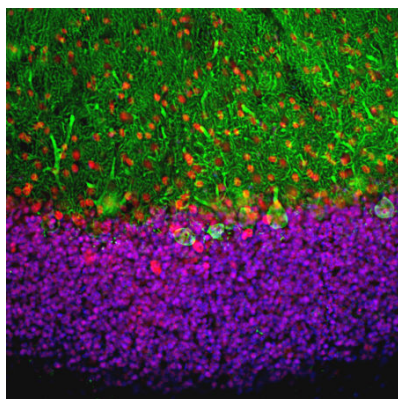
Images



ARG10737 anti-MeCP2 antibody ICC/IF image

Immunofluorescence: COS-1 cells stained with ARG10737 anti-MeCP2 antibody (red) at 1:5000 dilution and costained with Mouse mAb to ALDH1L1 (green) at 1:1000 dilution. DAPI (blue) for nuclear staining. Following fixation with 3.7% formalin for 5 min, cells were permeabilized with ice cold methanol, blocked and stained with above antibodies.

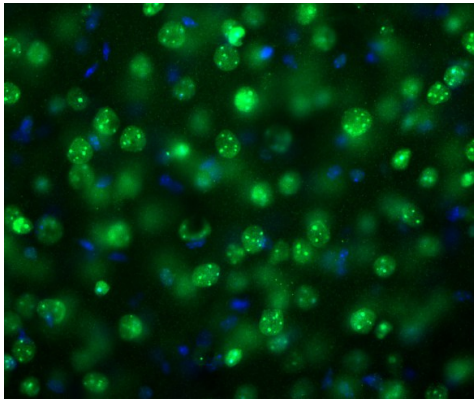
The MeCP2 antibody selectively stains nuclei of these African green monkey derived cells, while ALDH1L1 protein is expressed in the cytoplasm of these cells.



ARG10737 anti-MeCP2 antibody IHC-Fr image

Immunohistochemistry: Frozen section of Rat cerebellum stained with ARG10737 anti-MeCP2 antibody (red) at 1:5000 dilution and costained with Chicken pAb to calbindin (green) at 1:2000 dilution. DAPI (blue) for nuclear staining. (Sample preparation: Following transcardial perfusion with 4% paraformaldehyde, brain was post fixed for 24 hours, cut to 45 μ M, and free-floating sections were stained with above antibodies.)

The MeCP2 antibody selectively stains nuclei of neuronal cells to a variable degree. Calbindin, often used as Purkinje cell marker, is prominently expressed in dendrites and perikarya of these cells in the cerebellar molecular layer.



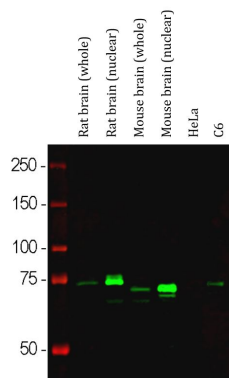
ARG10737 anti-MeCP2 antibody IHC-Fr image

Immunohistochemistry: Frozen sections of Mouse brain, which was cut at 45 μ m on a vibratome after perfusion with 4% paraformaldehyde and overnight fixation, was stained with ARG10737 anti-MeCP2 antibody. MeCP2 was mainly associated with methylated DNA in nucleus of neuron cells (green). Blue shows DAPI staining of nuclear DNA.



ARG10737 anti-MeCP2 antibody WB image

Western blot: A nuclear extract from mouse brain with ARG10737 anti-MeCP2 antibody. This antibody recognizes a strong and clear band at 75 kDa corresponding to total MeCP2 of mouse brain in SDS-PAGE, while molecular weight of MeCP2 protein is 54 kDa.



ARG10737 anti-MeCP2 antibody WB image

Western blot: Rat brain (whole), Rat brain (nuclear), Mouse brain (whole), Mouse brain (nuclear), HeLa and C6 cell lysates stained with ARG10737 anti-MeCP2 antibody (green) at 1:20000 dilution.

MeCP2 protein predominantly detected in the nuclear fraction of the lysates.