MeCP2 Protein, Human (HEK293, His)

Cat. No.:	HY-P70366
Synonyms:	rHuMethyl-CpG-binding protein 2/MECP2, His; Methyl-CpG-binding protein 2; MECP2; MeCp-2 protein
Species:	Human
Source:	HEK293
Accession:	P51608 (M1-S486)
Gene ID:	4204
Molecular Weight:	Approximately 90.0 kDa

PROPERTIES

AA Sequence	M V A G M L G L R E E K S E D Q D L Q G L K D K P L K F K K V K K D K K E E K E G K H E P V Q P S A H H S A E P A E A G K A E T S E G S G S A P A V P E A S A S P K Q R R S I I R D R G P M Y D D P T L P E G W T R K L K Q R K S G R S A G K Y D V Y L I N P Q G K A F R S K V E L I A Y F E K V G D T S L D P N D F D F T V T G R G S P S R R E Q K P P K K P K S P K A P G T G R G R G R P K G S G T T R P K A A T S E G V Q V K R V L E K S P G K L L V K M P F Q T S P G G K A E G G G A T T S T Q V M V I K R P G R K R K A E A D P Q A I P K K R G R K P G S V V A A A A A E A K K K A V K E S S I R S V Q E T V L P I K K R K T R E T V S I E V K E V V K P L L V S T L G E K S G K G L K T C K S P G R K S K E S S P K G R S S S A S S P P K K E H H H H H H H S E S P K A P V P L L P P L P P P P P E P E S S E D P T S P P E P Q D L S S S V C K E E K M P R G G S L E S D G C P K E P A K T Q P A V A T A A T A A E K Y K H R G E G E R K D I V S S S M P R P N R E E P V D S R T P V T E R V S
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 μm filtered solution of 20 mM Tris, 300 mM NaCl, 5% Trehalose, 2 mM DTT, pH 8.0 or 20 mM Histidine-HCl, 8% Sucrose, 50mM NaCl, 0.02% Tween 80, pH 6.0
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	The MeCP2 protein functions as a chromosomal entity with a distinctive ability to bind specifically to methylated DNA, targeting individual methyl-CpG pairs independently of flanking DNA sequences. Operating as a mediator of transcriptional repression, MeCP2 engages in interactions with histone deacetylase and the corepressor SIN3A. Moreover, it demonstrates dual binding capabilities, associating with both 5-methylcytosine (5mC) and 5-hydroxymethylcytosine (5hmC)-containing DNA, exhibiting a notable preference for 5-methylcytosine (5mC). The versatility of MeCP2 is further emphasized by its interactions with FNBP3, CDKL5, ATRX, NCOR2, TBL1XR1, and TBL1X, each interaction contributing to various cellular processes, including the recruitment of co-repressor complexes and the orchestration of heterochromatin organization. This multifaceted functionality underscores the pivotal role of MeCP2 in epigenetic regulation and the modulation of gene expression.

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