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FMR1 Antibody (monoclonal) (M01)

Mouse monoclonal antibody raised against a partial recombinant FMR1.
Catalog # AT2078a

Product Information

Application	WB, E
Primary Accession	Q06787
Other Accession	NM_002024
Reactivity	Human
Host	mouse
Clonality	monoclonal
Isotype	IgG1 Kappa
Clone Names	2D4
Calculated MW	71174

Additional Information

Gene ID	2332
Other Names	Fragile X mental retardation protein 1, FMRP, Protein FMR-1, FMR1
Target/Specificity	FMR1 (NP_002015, 121 a.a. ~ 220 a.a) partial recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.
Dilution	WB~~1:500~1000 E~~N/A
Format	Clear, colorless solution in phosphate buffered saline, pH 7.2 .
Storage	Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.
Precautions	FMR1 Antibody (monoclonal) (M01) is for research use only and not for use in diagnostic or therapeutic procedures.

Background

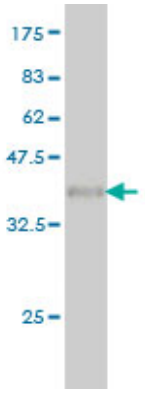
The protein encoded by this gene binds RNA and is associated with polysomes. The encoded protein may be involved in mRNA trafficking from the nucleus to the cytoplasm. A trinucleotide repeat (CGG) in the 5' UTR is normally found at 6-53 copies, but an expansion to 55-230 repeats is the cause of fragile X syndrome. Expansion of the trinucleotide repeat may also cause one form of premature ovarian failure (POF1). Multiple alternatively spliced transcript variants that encode different protein isoforms and which are located in different cellular locations have been described for this gene.

References

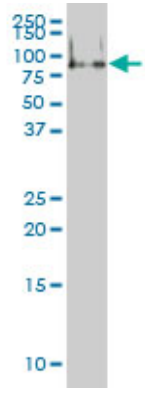
An information-rich CGG repeat primed PCR that detects the full range of fragile X expanded alleles and

minimizes the need for southern blot analysis. Chen L, et al. J Mol Diagn, 2010 Sep. PMID 20616364.Genetic diversity of the fragile X syndrome gene (FMR1) in a large Sub-Saharan West African population. Peprah EK, et al. Ann Hum Genet, 2010 Jul. PMID 20597902.An fMRI study of the prefrontal activity during the performance of a working memory task in premutation carriers of the fragile X mental retardation 1 gene with and without fragile X-associated tremor/ataxia syndrome (FXTAS). Hashimoto RI, et al. J Psychiatr Res, 2010 May 26. PMID 20537351.hnRNP C promotes APP translation by competing with FMRP for APP mRNA recruitment to P bodies. Lee EK, et al. Nat Struct Mol Biol, 2010 Jun. PMID 20473314.A simple, high-throughput assay for Fragile X expanded alleles using triple repeat primed PCR and capillary electrophoresis. Lyon E, et al. J Mol Diagn, 2010 Jul. PMID 20431035.

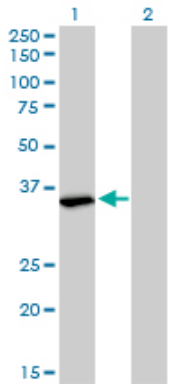
Images



Antibody Reactive Against Recombinant Protein.Western Blot detection against Immunogen (36.74 KDa) .

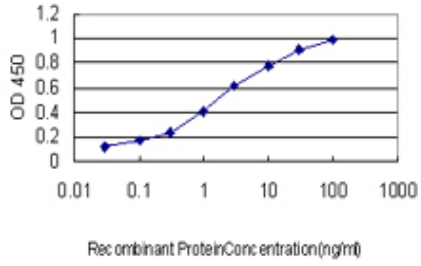


FMR1 monoclonal antibody (M01), clone 2D4 Western Blot analysis of FMR1 expression in HepG2 ((Cat # AT2078a)

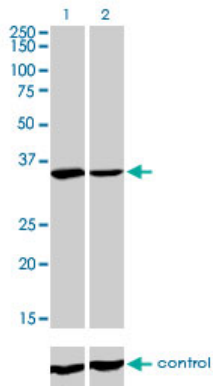


Western Blot analysis of FMR1 expression in transfected 293T cell line by FMR1 monoclonal antibody (M01), clone 2D4.

Lane 1: FMR1 transfected lysate(34.1 KDa).
Lane 2: Non-transfected lysate.



Detection limit for recombinant GST tagged FMR1 is approximately 0.1ng/ml as a capture antibody.



Western blot analysis of FMR1 over-expressed 293 cell line, cotransfected with FMR1 Validated Chimera RNAi ((Cat # AT2078a)