

MPP8/MPHOSPH8 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP56813

Product Information

Application	IHC-P, IHC-F, IF, ICC
Primary Accession	Q99549
Reactivity	Rat, Pig, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	97182

Additional Information

Gene ID	54737
Other Names	M-phase phosphoprotein 8, Two hybrid-associated protein 3 with RanBPM, Twa3, MPHOSPH8 (HGNC:29810), MPP8
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	MPHOSPH8 (HGNC:29810)
Function	Heterochromatin component that specifically recognizes and binds methylated 'Lys-9' of histone H3 (H3K9me) and promotes recruitment of proteins that mediate epigenetic repression (PubMed: 26022416 , PubMed: 28581500 , PubMed: 29211708). As part of the HUSH complex, promotes epigenetic repression of mobile genetic elements, such as retroviruses and transposable elements: the HUSH complex mainly represses LINE-1 (L1) retrotransposons that are still capable of transposition (PubMed: 29211708). Silencing events often occur within introns of transcriptionally active genes, and lead to the down-regulation of host gene expression (PubMed: 29211708). MPHOSPH8 mediates recruitment of the HUSH complex to H3K9me3 sites: the HUSH complex is recruited to genomic loci rich in H3K9me3 and is required to maintain transcriptional silencing by promoting recruitment of SETDB1, a histone methyltransferase that mediates further deposition of H3K9me3, as well as MORC2, a chromatin remodeler that compacts chromatin (PubMed: 26022416 , PubMed: 28581500). The HUSH complex is also involved in the silencing of unintegrated retroviral DNA by being recruited by ZNF638: some part of the retroviral DNA formed immediately after infection remains unintegrated in the host genome and is

transcriptionally repressed (PubMed:[30487602](#)). As part of the HUSH2 complex, promotes epigenetic repression of interferon-stimulated genes (PubMed:[33144593](#), PubMed:[39013473](#)). Binds H3K9me and promotes DNA methylation by recruiting DNMT3A to target CpG sites; these can be situated within the coding region of the gene (PubMed:[20871592](#)). Mediates silencing of E-cadherin (CDH1) and protocadherin genes in the nervous system (PubMed:[20871592](#)).

Cellular Location

Nucleus. Chromosome Note=Detected on heterochromatin (PubMed:20871592, PubMed:26022416, PubMed:34415726). Dissociates from chromatin during interphase and early mitosis (PubMed:23416073). Detected on nucleosomes (PubMed:20871592).

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