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MCM8 Rabbit pAb

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Catalog # AP57013

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q9UJA3
Predicted	Dog, Human, Mouse, Rabbit, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	93697
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human MCM8
Epitope Specificity	301-400/840
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Nucleus. Localizes to nuclear foci and colocalizes with RAD51.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The protein encoded by this gene is one of the highly conserved mini-chromosome maintenance proteins (MCM) that are essential for the initiation of eukaryotic genome replication. The hexameric protein complex formed by the mini-chromosome maintenance proteins is a key component of the pre-replication complex and may be involved in the formation of replication forks and in the recruitment of other DNA replication related proteins. This protein contains the central domain that is conserved among the mini-chromosome maintenance proteins. The encoded protein may interact with other mini-chromosome maintenance proteins and play a role in DNA replication. This gene may be associated with length of reproductive lifespan and menopause. Alternatively spliced transcript variants encoding distinct isoforms have been described. [provided by RefSeq, Jul 2013]

Additional Information

Gene ID	84515
Other Names	DNA helicase MCM8, 5.6.2.4, DNA 3'-5' helicase MCM8, Minichromosome maintenance 8, MCM8, C20orf154
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=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	MCM8
Synonyms	C20orf154
Function	Component of the MCM8-MCM9 complex, which is involved in the repair of double-stranded DNA breaks (DBSs) and DNA interstrand cross- links (ICLs) by homologous recombination (HR) (PubMed:23401855). The MCM8-MCM9 complex is a 3'-5' DNA helicase and single-stranded (ss)DNA- stimulated ATPase which binds ssDNA in the presence of nucleoside triphosphates (PubMed:37309874). Required for DNA resection by the MRE11-RAD50-NBN/NBS1 (MRN) complex by recruiting the MRN complex to the repair site and by promoting the complex nuclease activity (PubMed:26215093). Indirectly regulates the recruitment of downstream effector RAD51 to DNA damage sites including DBSs and ICLs, probably by regulating the localization of the MNR complex (PubMed:23401855). The MCM8-MCM9 complex is dispensable for DNA replication and S phase progression (PubMed:23401855). May play a non-essential for DNA replication: may be involved in the activation of the prereplicative complex (pre-RC) during G(1) phase by recruiting CDC6 to the origin recognition complex (ORC) (PubMed:15684404). Facilitates somatic mitochondrial (mt)DNA recombination (PubMed:36355348). Plays a key role during gametogenesis, probably by regulating HR (By similarity). Stabilizes MCM9 protein (PubMed:23401855, PubMed:26215093).
Cellular Location	Nucleus. Chromosome. Cytoplasm. Mitochondrion matrix. Note=Localizes to nuclear foci (PubMed:26215093). Localizes to double-stranded DNA breaks (PubMed:23401855). Binds chromatin throughout the cell cycle (PubMed:15684404). Colocalizes with mitochondrial DNA (PubMed:36355348).
Tissue Location	Highest levels in placenta, lung and pancreas. Low levels in skeletal muscle and kidney. Expressed in various tumors with highest levels in colon and lung cancers

Background

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Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.