

# PMS2

Rabbit Monoclonal antibody(Mab)
Catalog # AD80243

#### **Product Information**

Application IHC-P
Primary Accession P54278
Reactivity Human
Host Rabbit
Clonality Monoclonal
Clone Names 157G1F5
Calculated MW 95797

## **Additional Information**

Gene ID 5395

Gene Name PMS2 (<u>HGNC:9122</u>)

Other Names Mismatch repair endonuclease PMS2, 3.1.-.-, DNA mismatch repair protein

PMS2, PMS1 protein homolog 2, PMS2 (HGNC:9122)

**Dilution** IHC-P~~Ready-to-use

**Storage** Maintain refrigerated at 2-8°C.

**Precautions** PMS2 Antibody is for research use only and not for use in diagnostic or

therapeutic procedures.

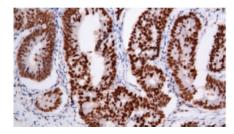
### **Protein Information**

Name PMS2 ( HGNC:9122)

**Function** Component of the post-replicative DNA mismatch repair system (MMR)

(PubMed:30653781, PubMed:35189042). Heterodimerizes with MLH1 to form MutL alpha. DNA repair is initiated by MutS alpha (MSH2-MSH6) or MutS beta (MSH2-MSH3) binding to a dsDNA mismatch, then MutL alpha is recruited to the heteroduplex. Assembly of the MutL-MutS-heteroduplex ternary complex in presence of RFC and PCNA is sufficient to activate endonuclease activity of PMS2. It introduces single-strand breaks near the mismatch and thus generates new entry points for the exonuclease EXO1 to degrade the strand containing the mismatch. DNA methylation would prevent cleavage and therefore assure that only the newly mutated DNA strand is going to be corrected. MutL alpha (MLH1-PMS2) interacts physically with the clamp loader subunits of DNA polymerase III, suggesting that it may play a role to recruit the DNA polymerase III to the site of the MMR. Also implicated in DNA damage signaling, a process which induces cell cycle arrest and can lead to apoptosis in case of major DNA damages. Possesses an ATPase activity, but in the absence of gross structural changes, ATP hydrolysis may not be necessary

# **Images**



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