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PMS2 Antibody

Rabbit mAb
Catalog # AP90173

Product Information

Application	WB, IHC, IF, FC, ICC, IP, IHF
Primary Accession	P54278
Reactivity	Human
Clonality	Monoclonal
Other Names	DNA mismatch repair gene; DNA mismatch repair protein PMS2; HNPCC4; PMS1 protein homolog 2;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	95797

Additional Information

Dilution	WB 1:500~1:2000 IHC 1:50~1:200 ICC/IF 1:50~1:200 IP 1:50 FC 1:50
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human PMS2
Description	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.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

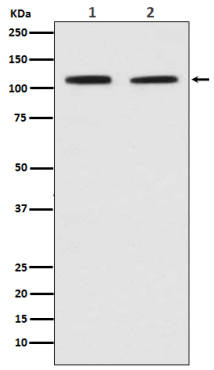
Protein Information

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 for proficient mismatch repair (PubMed:35189042).

Cellular Location Nucleus

Images



Western blot analysis of PMS2 in (1) Jurkat cell lysate; (2)HeLa cell lysate.

Image not found : 202311/AP90173-IHC.jpg

Immunohistochemical analysis of paraffin-embedded human tonsil, using PMS2 Antibody.

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