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PMS2 Antibody (C-term) Blocking Peptide

Synthetic peptide
Catalog # BP7356b

Specification

PMS2 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession P54278

PMS2 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 5395

Other Names
Mismatch repair endonuclease PMS2, 31--, DNA mismatch repair protein PMS2, PMS1 protein homolog 2, PMS2, PMSL2

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7356b was selected from the C-term region of human PMS2. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

PMS2 Antibody (C-term) Blocking Peptide - Protein Information

Name PMS2 (HGNC:9122)

PMS2 Antibody (C-term) Blocking Peptide - Background

PMS2 is involved in DNA mismatch repair. It forms a heterodimer with MLH1 and this complex interacts with other complexes bound to mismatched bases. Mutations in PMS2 gene are associated with hereditary nonpolyposis colorectal cancer, Turcot syndrome, and are a cause of supratentorial primitive neuroectodermal tumors.

PMS2 Antibody (C-term) Blocking Peptide - References

Kweekel,D.M., Br. J. Cancer 101 (2), 357-362 (2009)Michiels,S., Carcinogenesis 30 (5), 763-768 (2009)

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

Cellular Location
Nucleus.

PMS2 Antibody (C-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides