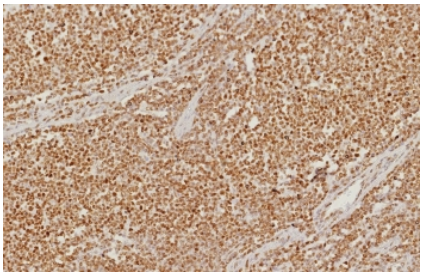
PMS2 Antibody / Postmeiotic Segregation Increased 2 Antibody [clone PMS2/8374R] (V5202)

Catalog No.	Formulation	Size
V5202-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5202-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5202SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

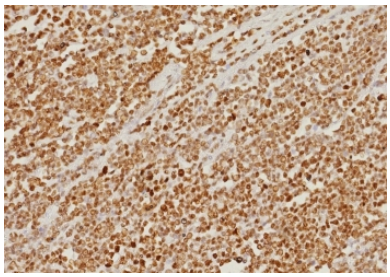
Recombinant RABBIT MONOCLONAL

Bulk quote request

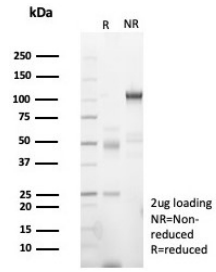
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	PMS2/8374R
Purity	Protein A/G affinity
UniProt	P54278
Localization	Nucleus
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This PMS2 Antibody / Postmeiotic Segregation Increased 2 Antibody is available for research use only.



PMS2 Antibody Human Colon Carcinoma Nuclear IHC. Immunohistochemical staining of FFPE human colon carcinoma tissue using PMS2 antibody (clone PMS2/8374R) demonstrated strong nuclear staining in tumor cells, consistent with the expected localization of PMS2 as a DNA mismatch repair protein. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9 Tris-EDTA buffer (10 mM Tris, 1 mM EDTA) for 20 minutes followed by cooling prior to staining. The robust nuclear immunoreactivity supports preserved PMS2 expression within the mismatch repair pathway. This PMS2 Antibody, also called a Postmeiotic Segregation Increased 2 Antibody, is useful for investigating DNA mismatch repair, genomic stability, Lynch syndrome, and microsatellite instability.



PMS2 Antibody Human Colorectal Tumor IHC. Immunohistochemical staining of FFPE human colon carcinoma tissue using PMS2 antibody (clone PMS2/8374R) demonstrated strong nuclear staining in tumor cells, consistent with the expected localization of PMS2 as a DNA mismatch repair protein. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9 Tris-EDTA buffer (10 mM Tris, 1 mM EDTA) for 20 minutes followed by cooling prior to staining. The robust nuclear immunoreactivity is consistent with intact PMS2 expression in colorectal tumor cells. This PMS2 Antibody, also called a Postmeiotic Segregation Increased 2 Antibody, is useful for investigating DNA mismatch repair, genomic stability, Lynch syndrome, and microsatellite instability.



SDS-PAGE analysis of purified, BSA-free PMS2 antibody (clone PMS2/8374R) as confirmation of integrity and purity.

Description

PMS2 Antibody / Postmeiotic Segregation Increased 2 Antibody recognizes PMS2, a DNA mismatch repair protein encoded by the Postmeiotic Segregation Increased 2 gene. PMS2 is a key component of the mismatch repair pathway that maintains genomic stability by correcting base-base mismatches and insertion-deletion loops generated during DNA replication. Following recognition of DNA mismatches by the MutS complexes, PMS2 forms the MutL alpha heterodimer with MLH1, where it provides the endonuclease activity required to initiate repair. This highly conserved pathway protects cells from mutation accumulation and helps preserve genome integrity throughout repeated rounds of cell division.

In addition to its central role in mismatch repair, Postmeiotic Segregation Increased 2 contributes to DNA damage signaling, cell cycle checkpoint regulation, apoptosis, and cellular responses to genotoxic stress. Loss of PMS2 function results in elevated mutation rates, chromosomal instability, and increased susceptibility to malignant transformation. Because genomic maintenance is essential for normal tissue homeostasis, PMS2 is widely studied in molecular genetics, cancer biology, and DNA repair research. Expression is predominantly nuclear, reflecting its participation in repair of chromosomal DNA during and after replication.

Pathogenic germline variants in PMS2 are a recognized cause of Lynch syndrome, an inherited cancer predisposition syndrome characterized by increased risks of colorectal, endometrial, ovarian, gastric, pancreatic, urinary tract, and several other malignancies. Somatic loss of PMS2 expression is also frequently observed in mismatch repair-deficient tumors exhibiting microsatellite instability. Consequently, immunohistochemical evaluation of PMS2 has become a routine component of diagnostic pathology and is commonly performed alongside MLH1, MSH2, and MSH6 to assess mismatch repair status, identify patients who may benefit from additional genetic testing, and support precision oncology approaches.

Clone PMS2/8374R is a recombinant rabbit monoclonal antibody developed for specific detection of PMS2 in research applications. Its recombinant format provides excellent specificity and lot-to-lot consistency for studies of DNA mismatch repair, genomic stability, hereditary cancer syndromes, and tumor biology. A PMS2 Antibody is a valuable research tool for investigating DNA repair mechanisms, Lynch syndrome, microsatellite instability, and maintenance of genomic integrity.

For a broader overview of PMS2 biology, DNA mismatch repair, and genomic stability, including HuProt protein microarray specificity validation of clone PMS2/4373R, see our PMS2 Antibody / DNA Mismatch Repair Protein Antibody page.

Application Notes

Optimal dilution of the PMS2 Antibody / Postmeiotic Segregation Increased 2 Antibody should be determined by the researcher.

Immunogen

A recombinant partial protein sequence (within amino acids 1-200) from the human protein was used as the immunogen for the PMS2 antibody.

Storage

Aliquot the PMS2 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

PMS2 antibody, Postmeiotic Segregation Increased 2 antibody, DNA Mismatch Repair Protein antibody, PMS2 Homolog antibody

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