

Rabbit Anti-PMS2 [EPR3947]: RM0163, RM0163RTU7

Intended Use: For Research Use Only

Description: PMS2, a mismatch repair endonuclease, is a member of a family of genes involved in DNA mismatch repair. Carriers of the mismatch repair gene mutations have a high lifetime risk of developing Hereditary Non-Polyposis Colon Cancer (HNPCC) and several other cancers including endometrial cancer due to microsatellite instability (MSI) caused by accumulation of DNA replication errors in proliferating cells. Along with MLH1, MSH2 and MSH6, PMS2 antibody is helpful in diagnosis of MSI. An IHC study conducted by Mayo Clinic on 535 cases with MSI-high, 90% of the tumors showed loss of MLH1, MSH2 and/or MSH6 expression, while 70% of the remaining cases showed isolated loss of PMS2 expression. The loss of PMS2 was associated with young age of diagnosis and right-sided location but not with a striking family history of cancer. Endometrial carcinomas are the most common non-colorectal cancers associated with Lynch syndrome. The most common IHC abnormality in endometrial carcinomas with MSI was concurrent loss of MLH1/PMS2. Adding PMS2 and MSH6 to MLH1 and MSH2 antibodies increased sensitivity for diagnosis of MSI. Tumors with low-level MSI show unfavorable pathological characteristics compared to tumors with no MSI and tumors with high-level MSI.

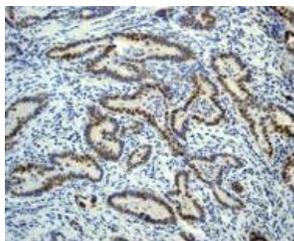
Specifications:

Clone: EPR3947
 Source: Rabbit
 Isotype: IgG
 Reactivity: Human
 Localization: Nucleus
 Formulation: Antibody in PBS pH7.4, containing BSA and $\leq 0.09\%$ sodium azide (NaN₃)
 Storage: Store at 2°- 8°C
 Applications: IHC
 Package:

Description	Catalog No.	Size
PMS2 Concentrated	RM0163	1 ml
PMS2 Prediluted	RM0163RTU7	7 ml

IHC Procedure*:

Positive Control Tissue: Colon
 Concentrated Dilution: 10-20
 Pretreatment: Citrate pH6.0 or EDTA pH8.0, 15 minutes using Pressure Cooker, or 30-60 minutes using water bath at 95°-99°C
 Incubation Time and Temp: 30-60 minutes @ RT
 Detection: Refer to the detection system manual
 * Result should be confirmed by an established diagnostic procedure.



FFPE human colon adenoma stained with anti-PMS2 using DAB

References:

1. Functional analysis of MSH2 unclassified variants found in suspected Lynch syndrome patients reveals pathogenicity due to attenuated mismatch repair. Wielders EA, et al. J Med Genet 51:245-53, 2014.
2. Heterogenous mismatch-repair status in colorectal cancer. Joost P, et al. Diagn Pathol 9:126, 2014.
3. MMR deficiency is common in high-grade endometrioid carcinomas and is associated with an unfavorable outcome. Nelson GS, et al. Gynecol Oncol 131:309-14, 2013.

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