

MLH1 monoclonal antibody

Catalog: MB21171

Host: Mouse

Reactivity: Human, Monkey

Background:

DNA-mismatch repair (MMR), a conserved process that involves correcting errors made during DNA synthesis, is crucial to the maintenance of genomic integrity. Lack of a functional DNA-mismatch repair pathway is a common characteristic of several different types of human cancers, either due to an MMR gene mutation or promoter-methylation gene silencing. MLH1 is a human homolog of the E. coli DNA mismatch repair gene mutL, consistent with the characteristic alterations in microsatellite sequences (RER+ phenotype) found in hereditary non-polyposis colon cancer (HNPCC). MLH1 is an integral part of the protein complex responsible for mismatch repair expressed in lymphocytes, heart, colon, breast, lung, spleen, testis, prostate, thyroid and gall bladder, and is methylated in several ovarian tumors. Loss of MLH1 protein expression is associated with a mutated phenotype, microsatellite instability and a predisposition to cancer. In hereditary nonpolyposis colorectal cancer (HNPCC), an autosomal dominant inherited cancer syndrome that signifies a high risk of colorectal and various other types of cancer, the MLH1 gene exhibits a pathogenic mutation. Inactivation of the MLH1 gene causes genome instability and predisposition to cancer. MLH1 also plays a role in meiotic recombination.

Product:

Purified antibody in PBS with 0.05% sodium azide.

Molecular Weight:

85kDa

Swiss-Prot:

P40692

Purification&Purity:

The antibody was affinity-purified from mouse ascites by affinity-chromatography using epitope-specific immunogen and the purity is > 95% (by SDS-PAGE).

Applications:

WB:1/500 - 1/2000 IHC:1/200 - 1/1000 IF:1/200 - 1/1000

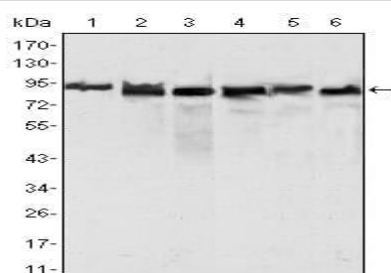
Storage&Stability:

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

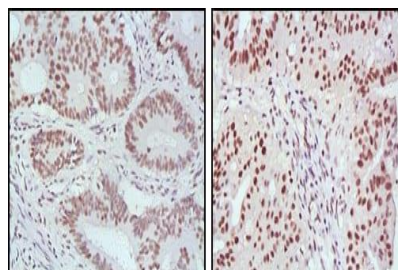
Isotype:

Mouse IgG1

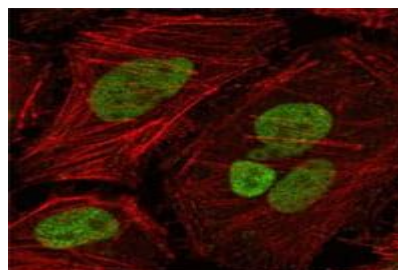
DATA:



Western blot analysis using MLH1 mouse mAb against Hela (1), MCF-7 (2) and A549 (3), Jurkat (4), 2R75 (5) and COS (6) cell lysate.



Immunohistochemical analysis of paraffin-embedded human rectum cancer (left) and ovarian cancer (right) tissues, showing nuclear localization with DAB staining using MLH1 mouse mAb.



Confocal Immunofluorescence analysis of Hela cells using MLH1 mouse mAb (green), showing nuclear localization. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.

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PRODUCT DATA SHEET

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Note:

For research use only, not for use in diagnostic procedure.

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