BT LAB
Bioassay Technology Laboratory
Optimize Your Research

MLH1 Monoclonal Antibody

Description

Product type	Antibody
Code	BT-MCA4592
Host	Mouse
Isotype	Mouse IgG1
Size	100μL, 50μL
Immunogen	Purified recombinant fragment of MLH1 (aa381-483) expressed in E. Coli.
Mol wt	85kDa
Species reactivity	Human,Monkey
Clonality	Monoclonal
Recommended application	WB,IHC,ICC
Concentration	N/A
Full name	N/A
Synonyms	FCC2;COCA2;HNPCC

This product is for research use only, not for use in human, therapeutic or diagnostic procedure.

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 nonpolyposis 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.

Recommended Dilution

WB: 1:500 - 1:2000

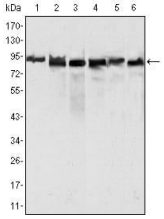
IHC-p: 1:200 - 1:1000

ICC: 1:200 - 1:1000

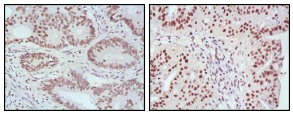
ELISA: 1:10000

Not yet tested in other applications.

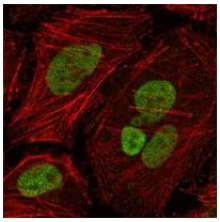
Images



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.

Storage

Store at 4°C short term. Aliquot and store at -20°C long term.

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