For Research Use Only

# MLH1 Monoclonal antibody

Catalog Number:67350-1-Ig Featured Product

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## Basic Information

Catalog Number:
67350-1-Ig

Size:
150ul , Concentration: 2100 ug/ml by Nanodrop and 1000 ug/ml by Bradford method using BSA as the standard;

Source:
Mouse

Isotype:
IgG2a

Immunogen Catalog Number:
AG27723

GenBank Accession Number:
BC006850

GeneID (NCBI):
4292

UNIPROT ID:
P40692

Full Name:
mutL homolog 1, colon cancer, nonpolyposis type 2 (E. coli)

Calculated MW:
756 aa, 85 kDa

Observed MW:
85-100 kDa, 40-45 kDa

Purification Method:
Protein A purification

CloneNo.:
2F12C4

Recommended Dilutions:
WB 1:5000-1:50000

## Applications

Tested Applications:
WB, ELISA

Species Specificity:
Human, rat

Positive Controls:

WB : A431 cells, HeLa cells, Caco-2 cells, COLO 320 cells, HEK-293 cells, Jurkat cells

## Background Information

MLH1, also named as COCA2, belongs to the DNA mismatch repair mutL/hexB family. It heterodimerizes with PMS2 to form MutL alpha which is a component of the post-replicative DNA mismatch repair system (MMR). 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. MLH1 also implicated in DNA damage signaling, a process which induces cell cycle arrest and can lead to apoptosis in case of major DNA damages. MLH1 heterodimerizes with MLH3 to form MutL gamma which plays a role in meiosis.(PMID: 16873062, PMID: 18206974) Defects in MLH1 are the cause of hereditary non-polyposis colorectal cancer type 2 (HNPCC2). Defects in MLH1 are a cause of mismatch repair cancer syndrome (MMRCS). Defects in MLH1 are a cause of Muir-Torre syndrome (MTS). Defects in MLH1 are a cause of susceptibility to endometrial cancer. Western blot analysis with an MLH1 antibody detected a 85-100 kDa band. Full-length human MLH1 is specifically cleaved into degradation products of 40-45 kDa by caspase-3 (PMID: 15087450, PMID: 19603033). This antibody is specific to MLH1.

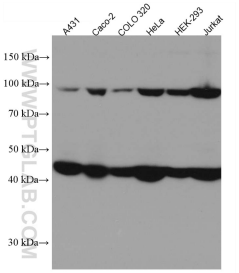
## Storage

Storage:
Store at -20°C.
Storage Buffer:
PBS with 0.1% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

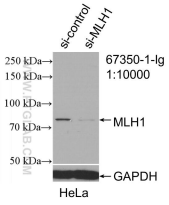
***** 20ul sizes contain 0.1% BSA**

For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
E: proteintech@ptglab.com
W: ptglab.com

## Selected Validation Data




Various lysates were subjected to SDS PAGE followed by western blot with 67350-1-Ig (MLH1 antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.




WB result of MLH1 antibody (67350-1-Ig; 1:10000; incubated at room temperature for 1.5 hours) with sh-Control and sh-MLH1 transfected HeLa cells.