For Research Use Only

MLH1 Polyclonal antibody

Catalog Number:11697-1-AP Featured Product 32 Publications

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Basic Information

Catalog Number:
11697-1-AP

Size:
150ul , Concentration: 700 ug/ml by Nanodrop;

Source:
Rabbit

Isotype:
IgG

Immunogen Catalog Number:
AG2319

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 kDa

Purification Method:
Antigen affinity purification

Recommended Dilutions:
WB 1:500-1:1000
IP 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate
IF/ICC 1:50-1:500

Applications

Tested Applications:
WB, IF/ICC, IP, ELISA

Cited Applications:
WB, IHC, IF, CoIP

Species Specificity:
human

Cited Species:
human, mouse, zebrafish

Positive Controls:

WB : A431 cells, HeLa cells, Jurkat cells, human testis tissue, HEK-293 cells

IP : HeLa cells,

IF/ICC : HeLa 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.

Notable Publications

Author	Pubmed ID	Journal	Application
Xuting Ran	35664732	Front Oncol	IHC
Jun Zhu	32396667	J Surg Oncol	IHC
Dazhang Bai	33949657	Hum Mol Genet	WB

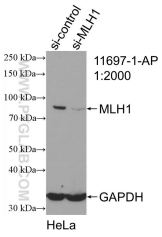
Storage

Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

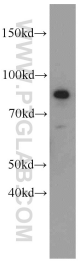
*** 20ul sizes contain 0.1% BSA

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

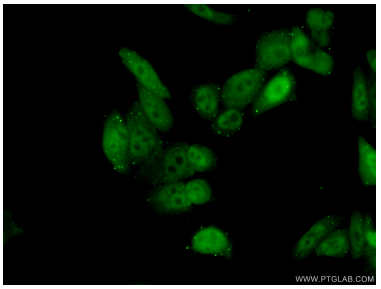
Selected Validation Data



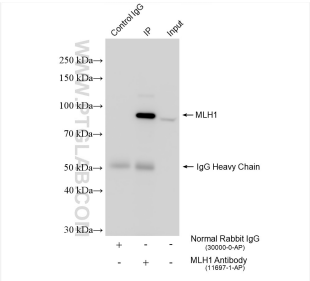
WB result of MLH1 antibody (11697-1-AP; 1:2000; incubated at room temperature for 1.5 hours) with sh-Control and sh-MLH1 transfected HeLa cells.



A431 cells were subjected to SDS PAGE followed by western blot with 11697-1-AP (MLH1 antibody) at dilution of 1:600 incubated at room temperature for 1.5 hours.



Immunofluorescent analysis of (10% Formaldehyde) fixed HeLa cells using 11697-1-AP (MLH1 antibody) at dilution of 1:50 and Alexa Fluor 488-conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).



IP result of anti-MLH1 (IP:11697-1-AP, 4ug; Detection:11697-1-AP 1:1000) with HeLa cells lysate 1200 ug.