

**MLH1 Antibody**  
Rabbit mAb  
Catalog # AP90169

## Specification

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### MLH1 Antibody - Product Information

Application	WB, IHC, FC, ICC, IP
Primary Accession	<a href="#">P40692</a>
Reactivity	Rat
Clonality	Monoclonal
<b>Other Names</b>	
DNA mismatch repair protein Mlh1; MutL protein homolog 1; COCA2;	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	84601 Da

### MLH1 Antibody - Additional Information

Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human MLH1
Description	This gene was identified as a locus frequently mutated in hereditary nonpolyposis colon cancer (HNPCC). It 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 HNPCC. Alternatively spliced transcript variants encoding different isoforms have been described, but their full-length natures have not been determined.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

### MLH1 Antibody - Protein Information

**Name** MLH1

**Synonyms** COCA2

#### Function

Heterodimerizes with PMS2 to form MutL alpha, a component of the post-replicative DNA mismatch repair system (MMR). DNA repair is initiated by MutS alpha (MSH2-MSH6) or MutS beta

(MSH2-MSH3) binding to a dsDNA mismatch, then MutL alpha is recruited to the heteroduplex. Assembly of the MutL-MutS-heteroduplex ternary complex in presence of RFC and PCNA is sufficient to activate endonuclease activity of PMS2. It introduces single-strand breaks near the mismatch and thus generates new entry points for the exonuclease EXO1 to degrade the strand containing the mismatch. DNA methylation would prevent cleavage and therefore assure that only the newly mutated DNA strand is going to be corrected. 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. Also implicated in DNA damage signaling, a process which induces cell cycle arrest and can lead to apoptosis in case of major DNA damages. Heterodimerizes with MLH3 to form MutL gamma which plays a role in meiosis.

#### Cellular Location

Nucleus. Chromosome Note=Recruited to chromatin in a MCM9-dependent manner

#### Tissue Location

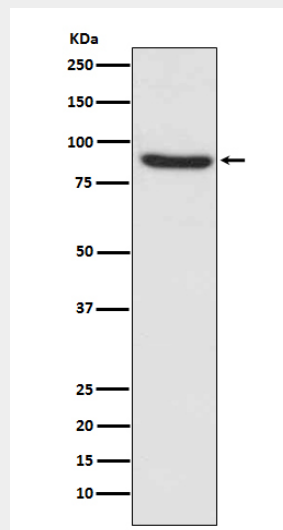
Colon, lymphocytes, breast, lung, spleen, testis, prostate, thyroid, gall bladder and heart

### MLH1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### MLH1 Antibody - Images



Western blot analysis of MLH1 in 293T cell lysate.