10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# Anti-MLH1 Picoband Antibody

**Catalog # ABO12410**

## Specification

### Anti-MLH1 Picoband Antibody - Product Information

| | |
|---|---|
| Application | **WB** |
| Primary Accession | P40692 |
| Host | **Rabbit** |
| Reactivity | **Human, Mouse, Rat** |
| Clonality | **Polyclonal** |
| Format | **Lyophilized** |

**Description**
Rabbit IgG polyclonal antibody for DNA mismatch repair protein Mlh1(MLH1) detection. Tested with WB in Human;Mouse;Rat.

**Reconstitution**
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

### Anti-MLH1 Picoband Antibody - Additional Information

**Gene ID** 4292

**Other Names**
DNA mismatch repair protein Mlh1, MutL protein homolog 1, MLH1, COCA2

**Calculated MW**
84601 MW KDa

**Application Details**
Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat<br>

**Subcellular Localization**
Nucleus .

**Tissue Specificity**
Colon, lymphocytes, breast, lung, spleen, testis, prostate, thyroid, gall bladder and heart.

**Protein Name**
DNA mismatch repair protein Mlh1

**Contents**
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

**Immunogen**
A synthetic peptide corresponding to a sequence at the C-terminus of human MLH1 (722-756aa KALRSHILPPKHFTEDGNILQLANLPDLYKVFERC), different from the related mouse sequence by three amino acids, and from the related rat sequence by four amino acids.

**Purification**

Immunogen affinity purified.

**Cross Reactivity**
No cross reactivity with other proteins.

| | |
|---|---|
| Storage | **At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.** |

## Anti-MLH1 Picoband 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

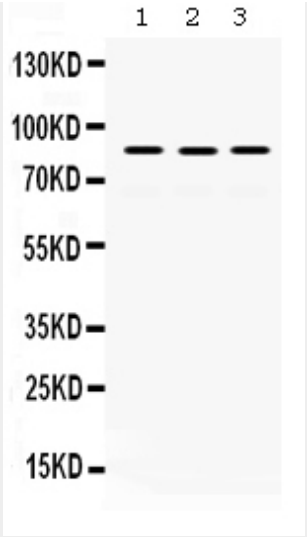
## Anti-MLH1 Picoband Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## Anti-MLH1 Picoband Antibody - Images

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999




Anti- MLH1 Picoband antibody, ABO12410, Western blottingAll lanes: Anti MLH1 (ABO12410) at 0.5ug/mlLane 1: Rat Lung Tissue Lysate at 50ugLane 2: Mouse Testis Tissue Lysate at 50ugLane 3: COLO320 Whole Cell Lysate at 40ugPredicted bind size: 84KDObserved bind size: 84KD

**Anti-MLH1 Picoband Antibody - Background**

MutL homolog 1, colon cancer, nonpolyposis type 2 (E. coli) is a protein that in humans is encoded by the MLH1 gene located on Chromosome 3. 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. Alternative splicing results in multiple transcript variants encoding distinct isoforms. Additional transcript variants have been described, but their full-length natures have not been determined.