

MLH1 (MutL Homolog 1) (Center) / HNPCC; Clone MLH1/7563 (Concentrate)

Availability/Contents:	Item #	Volume
	RA1219-C.1	0.1 ml
	RA1219-C.5	0.5 ml
	RA1219-C1	1 ml

Description:

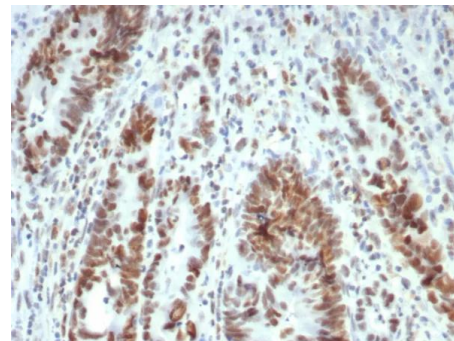
Species:	Mouse
Immunogen:	Recombinant full-length human MLH1 protein
Clone:	MLH1/7563
Isotype:	IgG1 / Kappa
Entrez Gene ID:	4292
Hu Chromosome Loc.:	3p21.3
Synonyms:	DNA mismatch repair protein Mlh1, MutL protein homolog 1, COCA2; DNA mismatch repair protein; FCC2; hMLH1; MutL homolog 1 colon cancer nonpolyposis type 2 (HNPCC2)
Weight of Antigen:	85kDa
Format:	200ug/ml of antibody purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide.
Specificity:	Recognizes a protein of 85kDa, identified as MLH1.
Background:	Defects in MLH1 are the cause of hereditary non-polyposis colorectal cancer type 2 (HNPCC2). 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-MSH6) 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.
Species Reactivity:	Human
Positive Control:	Human tonsil or colon carcinoma.
Cellular Localization:	Nucleus.
Titer/ Working Dilution:	Immunohistochemistry (Frozen and Formalin-fixed): 1-2µg/ml
Microbiological State:	This product is not sterile.

Storage: 2° C  8° C

 ScyTek Laboratories, Inc.
 205 South 600 West
 Logan, UT 84321
 U.S.A.

Uses/Limitations:

Not to be taken internally.
For Research Use Only.
This product is intended for qualitative immunohistochemistry with normal and neoplastic formalin-fixed, paraffin-embedded tissue sections, to be viewed by light microscopy.
Do not use if reagent becomes cloudy.
Do not use past expiration date.
Non-Sterile.



Ordering Information and Current Pricing at www.scytek.com

Formalin-fixed, paraffin-embedded human colon stained with MLH1 Mouse Monoclonal Antibody (MLH1/7563).

Procedure

- Tissue Section Pretreatment (Highly Recommended):** Staining of formalin fixed, paraffin embedded tissue sections is significantly enhanced by pretreatment with Tris-EDTA Solution (10x) pH 9.0 (ScyTek catalog# TES500) or Citrate Plus (10x) HIER Solution (ScyTek catalog# CPL500).
- Primary Antibody Incubation Time:** We suggest an incubation period of 30 minutes at room temperature. However, depending upon the fixation conditions and the staining system employed, optimal incubation should be determined by the user.
- Visualization:** For maximum staining intensity we recommend the "UltraTek HRP Anti-Polyvalent Lab Pack" (ScyTek catalog# UHP125, see IFU for instructions) combined with the "DAB Chromogen/Substrate Bulk Pack (High Contrast)" (ScyTek catalog# ACV500, see IFU for instructions).

Precautions:

Contains Sodium Azide as a preservative (0.09% w/v).
Do not pipette by mouth.
Avoid contact of reagents and specimens with skin and mucous membranes.
Avoid microbial contamination of reagents or increased nonspecific staining may occur.
This product contains no hazardous material at a reportable concentration according to U.S. 29 CFR 1910.1200, OSHA Hazardous Communication Standard and EC Directive 91/155/EC.

References:

- Raschle M, et al. J Biol Chem.1999; 274:32368-75.

Warranty:

No products or "Instructions For Use (IFU)" are to be construed as a recommendation for use in violation of any patents. We make no representations, warranties or assurances as to the accuracy or completeness of information provided on our IFU or website. Our warranty is limited to the actual price paid for the product. ScyTek Laboratories, Inc. is not liable for any property damage, personal injury, time or effort or economic loss caused by our products. Immunohistochemistry is a complex technique involving both histological and immunological detection methods. Tissue processing and handling prior to immunostaining can cause inconsistent results. Variations in fixation and embedding or the inherent nature of the tissue specimen may cause variations in results. Endogenous peroxidase activity or pseudoperoxidase activity in erythrocytes and endogenous biotin may cause non-specific staining depending on detection system used.

Storage: 2° C  8° C



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