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Rev.: 2018/12/5

MLH1
Recombinant Rabbit Monoclonal Antibody
Product Datasheet

Catalog# BX00030
Clone# RR633

Predicted Molecular Wt: 84kDa
Species Cross-reactivity: Human
Applications: IHC-P FC IF/ICC

Purity: ProA affinity purified IgG
Form: Liquid
Swissprot ID: P40692

Background:

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. 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.

Immunogen:

A synthetic peptide corresponding to MLH1 residues within aa400-500 of MLH1 was used as an immunogen.

Storage Buffer:

PBS 59%, Sodium azide 0.01%, Glycerol 40%, BSA 0.05%.

Storage conditions:

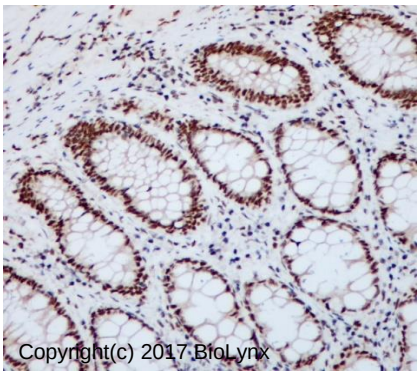
-20°C.

Storage instructions:

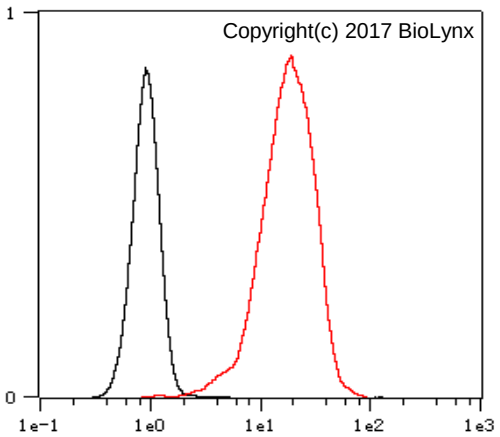
Shipped on blue ice. Upon delivery, aliquot, and store at -20°C. Avoid freeze / thaw cycles.

Recommended Dilutions:

IHC-P: 1:200 - 1:400
FC: 1:20 - 1:100
IF/ICC: 1:200 - 1:1,000



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human colon tissue labelling MLH1 with RR633 at 1:200. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9.0.



Overlay histogram showing Hela cells stained with RR633 (Red). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% TritonX-100 for 15 min. The cells were then incubated in the antibody (RR633, 1:100 dilution) in 1x PBS/1% BSA for 30 min at room temperature. The secondary antibody used was a Goat Anti-Rabbit Alexa Fluor® 488 (IgG H+L) at 1:2,000 dilution for 20 min at room temperature. Unlabelled sample (Black) was used as a control.

Background References:

1. Morales C et al. Cancer Res 74:446-59 (2014).

2. Mao, G. et al. J Biol Chem 283, 3211-6(2008) .

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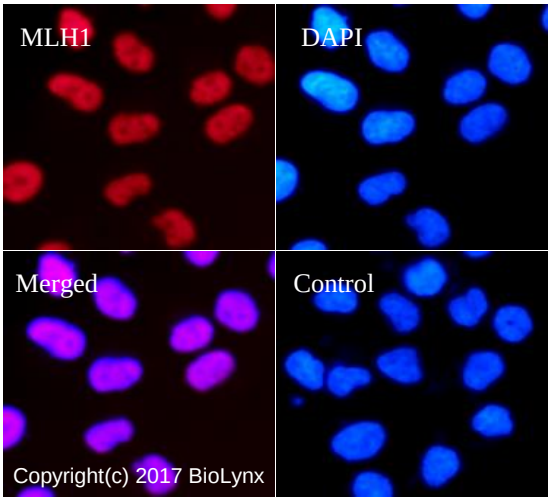

RR633 staining MLH1 in Hela cells by IF/ICC (immunofluorescence/immunocytochemistry). Cells were fixed with paraformaldehyde, permeabilized with 0.1% Triton X-100 and blocked with 10% goat serum for half an hour at room temperature. Samples were incubated with primary antibody (1:1,000) at 4°C. An Alexa Fluor® 488-conjugated Goat Anti-Rabbit IgG polyclonal was used as the secondary antibody (1:500). DAPI (blue) was used as the nuclear counter stain.

Control: PBS and secondary antibody, An Alexa Fluor® 488-conjugated Goat Anti-Rabbit IgG (1:500).

Product QC'd by:

For research use only. Not for use in diagnostic or therapeutic applications.