

# Product Datasheet

## MLH1 Antibody (MLH1/6467) [Alexa Fluor™ Plus 680] NBP3-14122AFP680

Unit Size: 0.1 ml

Store at 4C in the dark.

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**NBP3-14122AFP680**

MLH1 Antibody (MLH1/6467) [Alexa Fluor™ Plus 680]

<b>Product Information</b>	
<b>Unit Size</b>	0.1 ml
<b>Concentration</b>	Please see the vial label for concentration. If unlisted please contact technical services.
<b>Storage</b>	Store at 4C in the dark.
<b>Clonality</b>	Monoclonal
<b>Clone</b>	MLH1/6467
<b>Preservative</b>	0.05% Sodium Azide
<b>Isotype</b>	IgG1 Kappa
<b>Conjugate</b>	Alexa Fluor Plus 680
<b>Purity</b>	Protein A or G purified
<b>Buffer</b>	50mM Sodium Borate
<b>Product Description</b>	
<b>Host</b>	Mouse
<b>Gene ID</b>	4292
<b>Gene Symbol</b>	MLH1
<b>Species</b>	Human
<b>Specificity/Sensitivity</b>	This monoclonal antibody recognizes a protein of 83kDa, identified as MLH1. 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.
<b>Immunogen</b>	Recombinant full-length human MLH1 protein (Uniprot: P40692)

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<b>Product Application Details</b>	
<b>Applications</b>	Immunohistochemistry-Paraffin
<b>Recommended Dilutions</b>	Immunohistochemistry-Paraffin
<b>Application Notes</b>	Optimal dilution of this antibody should be experimentally determined.



### **Novus Biologicals USA**

10730 E. Briarwood Avenue  
Centennial, CO 80112  
USA  
Phone: 303.730.1950  
Toll Free: 1.888.506.6887  
Fax: 303.730.1966  
nb-customerservice@bio-techne.com

### **Bio-Techne Canada**

21 Canmotor Ave  
Toronto, ON M8Z 4E6  
Canada  
Phone: 905.827.6400  
Toll Free: 855.668.8722  
Fax: 905.827.6402  
canada.inquires@bio-techne.com

### **Bio-Techne Ltd**

19 Barton Lane  
Abingdon Science Park  
Abingdon, OX14 3NB, United Kingdom  
Phone: (44) (0) 1235 529449  
Free Phone: 0800 37 34 15  
Fax: (44) (0) 1235 533420  
info.EMEA@bio-techne.com

### **General Contact Information**

www.novusbio.com  
Technical Support: nb-technical@bio-  
techne.com  
Orders: nb-customerservice@bio-techne.com  
General: novus@novusbio.com

### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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