

Product Datasheet

MLH1 Antibody (MLH1/6710) [Alexa Fluor™ Plus 488] NBP3-14123AFP488

Unit Size: 0.1 ml

Store at 4C in the dark.

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NBP3-14123AFP488

MLH1 Antibody (MLH1/6710) [Alexa Fluor™ Plus 488]

Product Information	
Unit Size	0.1 ml
Concentration	Please see the vial label for concentration. If unlisted please contact technical services.
Storage	Store at 4C in the dark.
Clonality	Monoclonal
Clone	MLH1/6710
Preservative	0.05% Sodium Azide
Isotype	IgG1 Kappa
Conjugate	Alexa Fluor Plus 488
Purity	Protein A or G purified
Buffer	50mM Sodium Borate
Product Description	
Host	Mouse
Gene ID	4292
Gene Symbol	MLH1
Species	Human
Specificity/Sensitivity	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.
Immunogen	Recombinant full-length human MLH1 protein (Uniprot: P40692)



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Product Application Details	
Applications	Western Blot
Recommended Dilutions	Western Blot
Application Notes	Optimal dilution of this antibody should be experimentally determined.



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