

# Product Datasheet

## MLH1 Antibody (G168-728) [Janelia Fluor® 549] NBP3-08602JF549

Unit Size: 100 ul

Store at 4C in the dark.

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**NBP3-08602JF549**

MLH1 Antibody (G168-728) [Janelia Fluor® 549]

Product Information	
Unit Size	100 ul
Concentration	Please see the vial label for concentration. If unlisted please contact technical services.
Storage	Store at 4C in the dark.
Clonality	Monoclonal
Clone	G168-728
Preservative	0.05% Sodium Azide
Isotype	IgG1 Kappa
Conjugate	Janelia Fluor 549
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)
Notes	Sold under license from the Howard Hughes Medical Institute, Janelia Research Campus.
Product Application Details	
Applications	Immunohistochemistry-Paraffin
Recommended Dilutions	Immunohistochemistry-Paraffin
Application Notes	Optimal dilution of this antibody should be experimentally determined.



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### **Products Related to NBP3-08602JF549**

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H00004292-P01-10ug	Recombinant Human MLH1 GST (N-Term) Protein
H00004292-Q01-10ug	Recombinant Human MLH1 GST (N-Term) Protein
AF2535	MMR/CD206/Mannose Receptor Antibody [Unconjugated]
AF748	E-Cadherin Antibody [Unconjugated]

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### **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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