

Store at -20C
#3515**MLH1 (4C9C7) Mouse mAb**
Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, IF-IC, FC-FP	H Mk	Endogenous	85	Mouse IgG1	#P40692	4292

Product Usage Information**Application**

Western Blotting
Immunoprecipitation
Immunofluorescence (Immunocytochemistry)
Flow Cytometry (Fixed/Permeabilized)

Dilution

1:1000
1:100
1:300
1:400

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #37715.

Specificity/Sensitivity

MLH1 (4C9C7) Mouse mAb detects endogenous levels of total MLH1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with truncated recombinant MBP-MLH1.

Background

Mismatch repair (MMR), a conserved process that involves correcting errors made during DNA synthesis, is crucial to the maintenance of genomic integrity. MLH1 is the human homologue of the *E. coli* MMR gene *mutL*. MMR requires recognition of a base mismatch or insertion/deletion loop by a MutS homolog followed by recruitment of a MutL heterodimeric complex consisting of MLH1 and PMS1 (MutL-γ), PMS2 (MutL-α), or MLH3 (MutL-β). Other factors required for MMR in eukaryotes are EXO1, PCNA, RFC, RPA, DNA polymerases, and DNA ligases (reviewed in 1). Inactivation of the *MLH1* gene causes genome instability and predisposition to cancer (2-5). The *MLH1* gene is frequently mutated in hereditary nonpolyposis colon cancer (HNPCC) (6). MLH1 also plays a role in meiotic recombination (7).

Background References

1. Modrich, P. (2006) *J Biol Chem* 281, 30305-9.
2. Seng, T.J. et al. (2008) *Br J Cancer* 99, 375-82.
3. Harley, I. et al. (2008) *Gynecol Oncol* 109, 384-7.
4. Mao, G. et al. (2008) *J Biol Chem* 283, 3211-6.
5. Hubner, R.A. and Houlston, R.S. (2007) *J Natl Cancer Inst* 99, 1490; author reply 1490-1.
6. Vasen, H.F. (2005) *Fam Cancer* 4, 219-25.
7. Argueso, J.L. et al. (2003) *Mol Cell Biol* 23, 873-86.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry) **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

H: Human **Mk:** Monkey

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any

purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.

Orders: 877-616-CELL (2355) • orders@cellsignal.com • Support: 877-678-TECH (8324) • info@cellsignal.com • Web: cellsignal.com
For Research Use Only. Not for Use in Diagnostic Procedures.