

MSH2 (3A2) Mouse mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, IF-IC	H	Endogenous	100	Mouse IgG1	#P43246	4436

Product Usage Information**Application**

Western Blotting
Immunoprecipitation
Immunofluorescence (Immunocytochemistry)

Dilution

1:1000
1:50
1:50

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.

Specificity/Sensitivity

MSH2 (3A2) Mouse mAb detects endogenous levels of total MSH2 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant human MSH2.

Background

The DNA mismatch repair system (MMR) repairs post-replication DNA, inhibits recombination between non-identical DNA sequences and induces both checkpoint and apoptotic responses following certain types of DNA damage (1). MSH2 (MutS homologue 2) forms the hMutS-α dimer with MSH6 and is an essential component of the mismatch repair process. hMutS-α is part of the BRCA1-associated surveillance complex (BASC), a complex that also contains BRCA1, MLH1, ATM, BLM, PMS2 proteins and the Rad50-Mre11-NBS1 complex (2). Mutations in MSH2 have been found in a large proportion of hereditary non-polyposis colorectal cancer (Lynch Syndrome), the most common form of inherited colorectal cancer in the Western world (3). Mutations have also been associated with other sporadic tumors.

Background References

1. O'Brien, V. and Brown, R. (2006) *Carcinogenesis* 27, 682-92.
2. Wang, Y. et al. (2000) *Genes Dev* 14, 927-39.
3. Plotz, G. et al. (2006) *J Mol Histol* 37, 271-83.

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)

Cross-Reactivity Key

H: Human

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