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#2850

## MSH2 (3A2) Mouse mAb

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

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

- O'Brien, V. and Brown, R. (2006) *Carcinogenesis* 27, 682-92.
- Wang, Y. et al. (2000) *Genes Dev* 14, 927-39.
- 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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