

MSH2 (D24B5) XP™ Rabbit mAb



✓ 100 µl
(10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, IHC-P, IF-IC, F Endogenous	H, M, Mk	100 kDa	Rabbit IgG**

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).

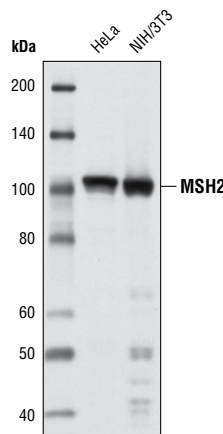
Mutations in MSH2 have been found in a large proportion of hereditary non-polyposis colorectal cancer (Lynch Syndrome), the most common form of inherited colorectal cancer in the Western world (3). Mutations have also been associated with other sporadic tumors.

Specificity/Sensitivity: MSH2 (D24B5) XP™ Rabbit mAb detects endogenous levels of total MSH2 protein.

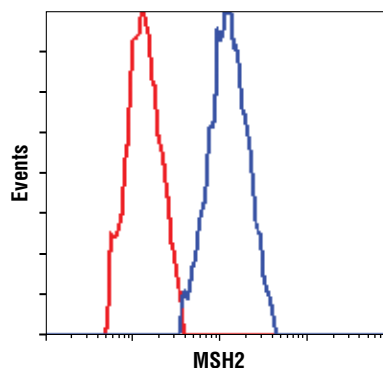
Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues at the amino terminus of human MSH2.

Background References:

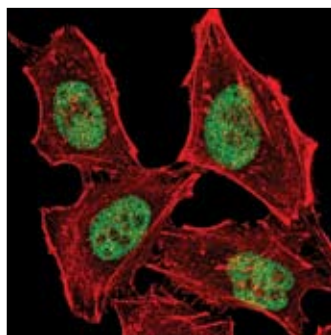
- (1) O'Brien, V. and Brown, R. (2006) *Carcinogenesis* 27, 682–92.
- (2) Wang, Y. et al. (2000) *Genes Dev* 14, 927–39.
- (3) Plotz, G. et al. (2006) *J Mol Histol* 37, 271–83.



Western blot analysis of extracts of HeLa and NIH/3T3 cells using MSH2 (D24B5) XP™ Rabbit mAb.



Flow cytometric analysis of HeLa cells using MSH2 (D24B5) XP™ Rabbit mAb (blue) compared to a nonspecific negative control antibody (red).



Confocal immunofluorescent analysis of HeLa cells using MSH2 (D24B5) XP™ Rabbit mAb (green). Actin filaments have been labeled with DY-554 phalloidin (red).

Entrez-Gene ID #4436
Swiss-Prot Acc. #P43246

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.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

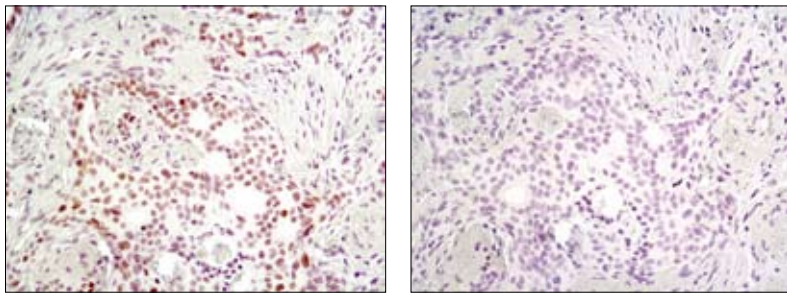
Western blotting	1:1000
Immunoprecipitation	1:100
Immunohistochemistry (Paraffin)	1:200
Unmasking buffer:	Citrate
Antibody diluent:	SignalStain® Antibody Diluent #8112
Immunofluorescence (IF-IC)	1:200
Flow Cytometry	1:200

For application specific protocols please see the web page for this product at www.cellsignaling.com.

Please visit www.cellsignaling.com for a complete listing of recommended companion products.

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

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma using MSH2 (D24B5) XP™ Rabbit mAb in the presence of control peptide (left) or antigen-specific peptide (right).