

## MSH2 Mouse Monoclonal Antibody Product Datasheet

Catalog# BX50142

Clone# BPM6143

**Predicted Molecular Wt:** 105kDa  
**Species Cross-reactivity:** Human  
**Applications:** IHC-P

**Purity:** ProG affinity purified IgG  
**Form:** Liquid  
**Swissprot ID:** P43246

### Background:

MSH2 is a 105 kDa nuclear antigen and encodes a protein of 934 amino acids. The MSH2 antibody gene is one of only 4 known to encode proteins involved in the repair of mismatch nucleotides following DNA replication or repair. Mutations in the MSH2 gene contribute to the development of sporadic colorectal carcinoma. MSHS mutations are responsible for 50% of hereditary non-polyposis colorectal cancer (HNPCC). The repair of mismatch DNA is essential to maintaining the integrity of genetic information over time. An alteration of microsatellite repeats is the result of slippage owing to strand misalignment during DNA replication and is referred to as microsatellite instability (MSI). These defects in DNA repair pathways have been related to human carcinogenesis. MSH-2 is involved in the initial cognition of mismatch nucleotides during the replication mismatch repair process. It is thought that after MSH2 binds to a mismatched DNA duplex it is joined by a heterodimer of MLH1 and PMSH, which together help facilitate the later steps in mismatch repair.

### Subcellular location:

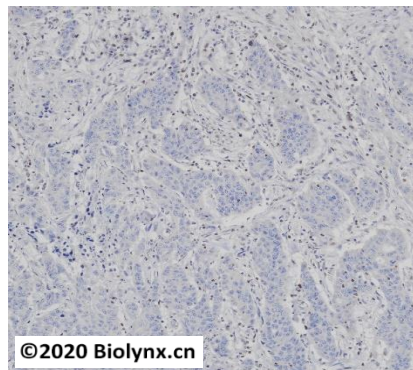
Nucleus

### Recommended method:

Heat induced epitope retrieval with Tris-EDTA buffer (pH 9.0), primary antibody incubate at RT (18°C-25°C) for 30 minutes.

### Immunogen:

Recombinant fragment (around aa 327-427) of human MSH2 protein



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human colon carcinoma tissue from Lynch disease labelling MSH2 with BPM6143. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9.0

### Storage Buffer:

PBS 59%, Sodium azide 0.01%, Glycerol 40%, BSA 0.05%.

### Storage conditions:

-25°C to -18°C

### Storage instructions:


Shipped on blue ice. Upon delivery, aliquot, and store at -25°C to -18°C. Avoid freeze / thaw cycles.

### Recommended Dilutions:

IHC-P: 1:100-1:200

### Background References:

1. Thibodeau SN, French AJ, et al. Cancer Res 1996 Nov 1;56(21):4836-40
2. National Committee for Clinical Laboratory Standards (NCCLS). Villanova, PA 1991;7(9). Order code M29-P.

Product QC'd by: 

For research use only. Not for use in diagnostic or therapeutic applications.