

Datasheet for ABIN968513  
**anti-MSH3 antibody (AA 136-349)**[3 Images](#)[4 Publications](#)[Go to Product page](#)

## Overview

Quantity:	50 µg
Target:	MSH3
Binding Specificity:	AA 136-349
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This MSH3 antibody is un-conjugated
Application:	Western Blotting (WB), Immunofluorescence (IF)

## Product Details

Immunogen:	Human MSH3 aa. 136-349
Clone:	52-MSH3
Isotype:	IgG1
Characteristics:	<ol style="list-style-type: none"><li>1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.</li><li>2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.</li><li>3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.</li><li>4. Please refer to us for technical protocols.</li></ol>
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

## Target Details

Target:	MSH3
Alternative Name:	MSH3 ( <a href="#">MSH3 Products</a> )
Background:	<p>Bacterial mismatch DNA repair involves the MutL, MutH, and MutS proteins, which forms a complex that mediates excision repair. Mutations in or deficiencies of any of these proteins results in a mutator phenotype that is characterized by genetic instability. Human homologs of MutS include MSH2, MSH3, and MSH6. MSH2 forms heterodimers with MSH6 (hMutSalpha) or MSH3 (hMutSbeta) that specifically bind single-mispaired nucleotides and a subset of insertion-deletion mismatches. In addition, these heterodimers have intrinsic ATPase activity that is regulated by mismatch binding. ADP-bound heterodimers bind mismatched nucleotides, while ATP-bound heterodimers do not. The role of MSH3 in genetic stability in human cells is unclear. However, MSH3 and MSH6 share roles in the control of mutation rates. Both participate in repair of replication errors containing base-base mismatches or 1-4 extra bases. The MSH3 gene is located upstream of the dihydrofolate reductase (DHFR) gene and is expressed at low levels in a variety of human tissues. Thus, MSH3 is a component of an adenosine nucleotide-regulated molecular switch whose activity is essential for classical nucleotide mismatch repair.</p>
Molecular Weight:	127 kDa
Pathways:	<a href="#">DNA Damage Repair</a> , <a href="#">Production of Molecular Mediator of Immune Response</a>

## Application Details

Comment:	Related Products: ABIN967389, ABIN968535
Restrictions:	For Research Use only

## Handling

Format:	Liquid
Concentration:	250 µg/mL
Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09 % sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	Store undiluted at -20°C.

## Publications

Product cited in:

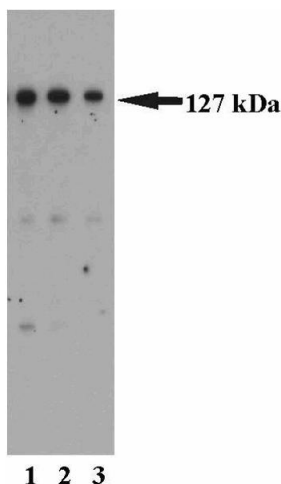
Wilson, Guerrette, Fishel: "Dissociation of mismatch recognition and ATPase activity by hMSH2-hMSH3." in: **The Journal of biological chemistry**, Vol. 274, Issue 31, pp. 21659-64, (1999) ([PubMed](#)).

Umar, Risinger, Glaab, Tindall, Barrett, Kunkel: "Functional overlap in mismatch repair by human MSH3 and MSH6." in: **Genetics**, Vol. 148, Issue 4, pp. 1637-46, (1998) ([PubMed](#)).

Watanabe, Ikejima, Suzuki, Shimada: "Genomic organization and expression of the human MSH3 gene." in: **Genomics**, Vol. 31, Issue 3, pp. 311-8, (1997) ([PubMed](#)).

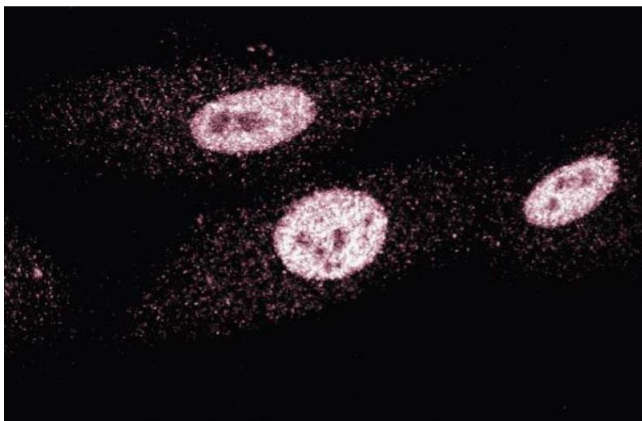
New, Liu, Crouse: "The yeast gene MSH3 defines a new class of eukaryotic MutS homologues." in: **Molecular & general genetics : MGG**, Vol. 239, Issue 1-2, pp. 97-108, (1993) ([PubMed](#)).

## Images



### Western Blotting

**Image 1.** Western blot analysis of MSH3 on a HeLa cell lysate (Human cervical epitheloid carcinoma, ATCC CCL-2). 2 µg/mL (lane 1), 1 µg/mL (lane 2) and 0.5 µg/mL (lane 3) of the mouse anti-human MSH3 antibody were used.



### Immunofluorescence

**Image 2.** Immunofluorescence staining of human fibroblasts.

Image 3.

