

## MSH6 Antibody

Catalog No: #34290

Package Size: #34290-1 50ul #34290-2 100ul

Orders: [order@signalwayantibody.com](mailto:order@signalwayantibody.com)Support: [tech@signalwayantibody.com](mailto:tech@signalwayantibody.com)

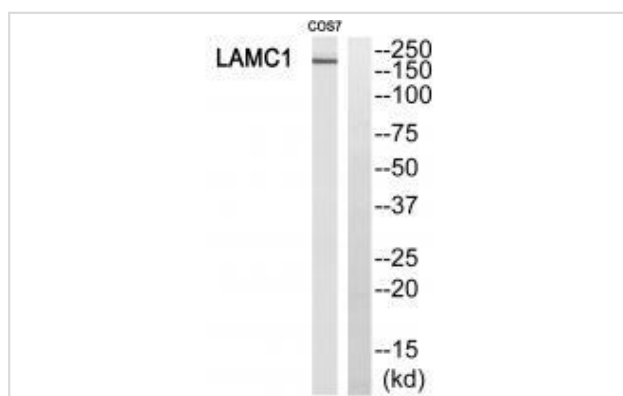
## Description

Product Name	MSH6 Antibody
Host Species	Rabbit
Clonality	Polyclonal
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Applications	WB
Species Reactivity	Hu Ms
Specificity	The antibody detects endogenous levels of total MSH6 protein.
Immunogen Type	Peptide
Immunogen Description	Synthesized peptide derived from internal of human MSH6.
Target Name	MSH6
Other Names	DNA mismatch repair protein Msh6; MutS-alpha 160 kDa subunit; G/T mismatch-binding protein; GTBP; GTMBP
Accession No.	Swiss-Prot: P52701NCBI Gene ID: 2956
Uniprot	P52701
GeneID	2956;
SDS-PAGE MW	170kd
Concentration	1.0mg/ml
Formulation	Rabbit IgG in phosphate buffered saline (without Mg <sup>2+</sup> and Ca <sup>2+</sup> ), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Storage	Store at -20°C

## Application Details

Western blotting: 1:500~1:3000

## Images



Western blot analysis of extracts from HUVEC cells, using MSH6 antibody #34290.

## Background

Component of the post-replicative DNA mismatch repair system (MMR). Heterodimerizes with MSH2 to form MutS alpha, which binds to DNA mismatches thereby initiating DNA repair. When bound, MutS alpha bends the DNA helix and shields approximately 20 base pairs, and recognizes single base mismatches and dinucleotide insertion-deletion loops (IDL) in the DNA. After mismatch binding, forms a ternary complex with the MutL alpha heterodimer, which is thought to be responsible for directing the downstream MMR events, including strand discrimination, excision, and resynthesis. ATP binding and hydrolysis play a pivotal role in mismatch repair functions. The ATPase activity associated with MutS alpha regulates binding similar to a molecular switch: mismatched DNA provokes ADP $\rightarrow$ ATP exchange, resulting in a discernible conformational transition that converts MutS alpha into a sliding clamp capable of hydrolysis-independent diffusion along the DNA backbone. This transition is crucial for mismatch repair. MutS alpha may also play a role in DNA homologous recombination repair. Recruited on chromatin in G1 and early S phase via its PWWP domain that specifically binds trimethylated 'Lys-36' of histone H3 (H3K36me3): early recruitment to chromatin to be replicated allowing a quick identification of mismatch repair to initiate the DNA mismatch repair reaction.

Acharya S., Proc. Natl. Acad. Sci. U.S.A. 93:13629-13634(1996).

Shiwaku H.O., DNA Res. 4:359-362(1997).

Palombo F., Science 268:1912-1914(1995).

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Note: This product is for in vitro research use only