

ARG66502 anti-MSH6 antibody

Package: 100 µl
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody recognizes MSH6
Tested Reactivity	Hu
Tested Application	IHC-P, WB
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2a, kappa
Target Name	MSH6
Species	Human
Immunogen	Synthetic peptide derived from Human MSH6.
Conjugation	Un-conjugated
Alternate Names	DNA mismatch repair protein Msh6; HNPCC5; p160; GTMBP; G/T mismatch-binding protein; HSAP; hMSH6; GTBP; MutS-alpha 160 kDa subunit

Application Instructions

Application table	Application	Dilution
	IHC-P	1:100 - 1:500
	WB	1:500 - 1:2000
Application Note	IHC-P: Antigen Retrieval: Tris/EDTA buffer (pH 8.0) was used. * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Observed Size	180 kDa	

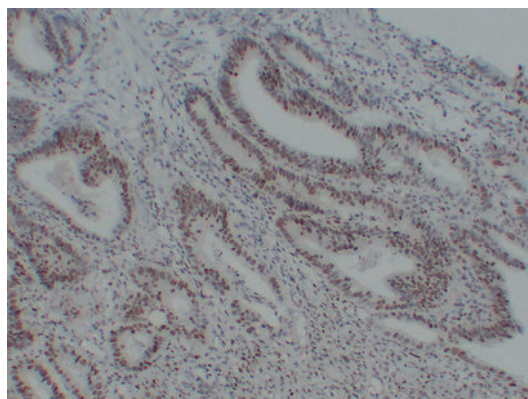
Properties

Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	PBS, 0.02% Sodium azide, 50% Glycerol and 0.5% BSA.
Preservative	0.02% Sodium azide
Stabilizer	50% Glycerol and 0.5% BSA
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Bioinformation

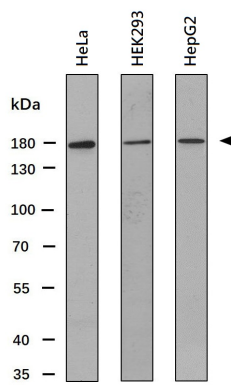
Gene Symbol	MSH6
Gene Full Name	mutS homolog 6
Background	<p>MSH6 is a member of the DNA mismatch repair MutS family. In <i>E. coli</i>, the MutS protein helps in the recognition of mismatched nucleotides prior to their repair. A highly conserved region of approximately 150 aa, called the Walker-A adenine nucleotide binding motif, exists in MutS homologs. The encoded protein heterodimerizes with MSH2 to form a mismatch recognition complex that functions as a bidirectional molecular switch that exchanges ADP and ATP as DNA mismatches are bound and dissociated. Mutations in this gene may be associated with hereditary nonpolyposis colon cancer, colorectal cancer, and endometrial cancer. Transcripts variants encoding different isoforms have been described. [provided by RefSeq, Jul 2013]</p>
Function	<p>MSH6 is a 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→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. [UniProt]</p>
Research Area	DNA Mismatch Repair System Study antibody
Calculated Mw	153 kDa
PTM	<p>The N-terminus is blocked.</p> <p>Phosphorylated by PRKCZ, which may prevent MutS alpha degradation by the ubiquitin-proteasome pathway. [UniProt]</p>
Cellular Localization	Nucleus. Chromosome. Note=Associates with H3K36me3 via its PWWP domain. [UniProt]

Images



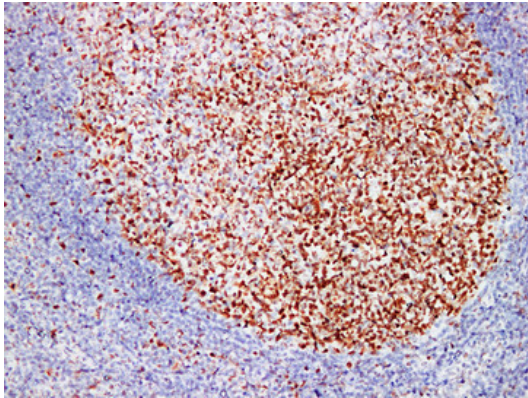
ARG66502 anti-MSH6 antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human colon carcinoma stained with ARG66502 anti-MSH6 antibody at 1:200 (4°C, overnight). Antigen Retrieval: Tris/EDTA buffer (pH 8.0) was used.



ARG66502 anti-MSH6 antibody WB image

Western blot: 30 µg of HeLa, HEK293 and HepG2 whole cell lysates stained with ARG66502 anti-MSH6 antibody at 1:1000 dilution.



ARG66502 anti-MSH6 antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human tonsil stained with ARG66502 anti-MSH6 antibody at 1:200 (4°C, overnight). Antigen Retrieval: Tris/EDTA buffer (pH 8.0) was used.