Anti-MSH2 antibody

Description	Rabbit polyclonal to MSH2.

Model	STJ94261
Host	Rabbit
Reactivity	Human, Mouse, Rat
Applications	ELISA, IF, IHC
Immunogen	Synthesized peptide derived from human MSH2
Immunogen Region	510-590 aa, Internal
Gene ID	4436
Gene Symbol	MSH2
Dilution range	IHC 1:100-1:300IF 1:200-1:1000ELISA 1:20000
Specificity	MSH2 Polyclonal Antibody detects endogenous levels of MSH2 protein.
Tissue Specificity	Ubiquitously expressed.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	DNA mismatch repair protein Msh2 hMSH2 MutS protein homolog 2
Molecular Weight	100 kDa
Clonality	Polyclonal
Conjugation	Unconjugated

Isotype	IgG
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:7325OMIM:114500
Alternative Names	DNA mismatch repair protein Msh2 hMSH2 MutS protein homolog 2
Function	Component of the post-replicative DNA mismatch repair system (MMR). Forms two different heterodimers: MutS alpha (MSH2-MSH6 heterodimer) and MutS beta (MSH2-MSH3 heterodimer) which binds to DNA mismatches thereby initiating DNA repair. When bound, heterodimers bend the DNA helix and shields approximately 20 base pairs. MutS alpha recognizes single base mismatches and dinucleotide insertion-deletion loops (IDL) in the DNA. MutS beta recognizes larger insertion-deletion loops up to 13 nucleotides long. After mismatch binding, MutS alpha or beta 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. In melanocytes may modulate both UV-B-induced cell cycle regulation and apoptosis.
Cellular Localization	Nucleus
Post-translational Modifications	Phosphorylated by PRKCZ, which may prevent MutS alpha degradation by the ubiquitin-proteasome pathway.