

Product datasheet for TA328162

MSH2 Mouse Monoclonal Antibody [Clone ID: 1184CT1.3.2]

Product data:

Product Type:	Primary Antibodies
Clone Name:	1184CT1.3.2
Applications:	WB
Recommend Dilution:	WB: 1:2000
Reactivity:	Human
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Purified His-tagged MSH2 protein was used to produced this monoclonal antibody.
Formulation:	PBS with 0.09% (W/V) sodium azide
Concentration:	0.5mg/ml
Purification:	This antibody is purified through a protein G column, followed by dialysis against PBS.
Gene Name:	mutS homolog 2
Database Link:	NP_000242 Entrez Gene 4436 Human



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Background:

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.

Synonyms:

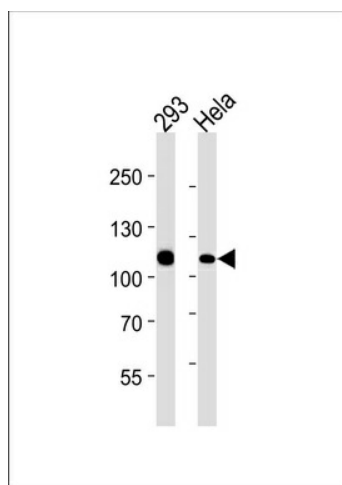
COCA1; FCC1; HNPCC; HNPCC1; LCFS2

Protein Families:

Druggable Genome, Stem cell - Pluripotency

Protein Pathways:

Colorectal cancer, Mismatch repair, Pathways in cancer

Product images:

MSH2 Antibody (Center) (Cat. #TA328162) western blot analysis in 293, HeLa cell line lysates (35ug/lane). This demonstrates the MSH2 antibody detected the MSH2 protein (arrow).