Product Datasheet

MSH2 Rabbit mAb

Catalog No: #52063

Package Size: #52063-1 50ul #52063-2 100ul

Orders: order@signalwayantibody.com
Support: tech@signalwayantibody.com

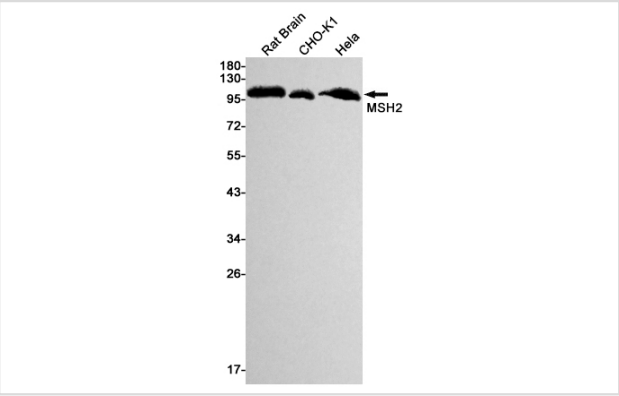
Description

Product Name	MSH2 Rabbit mAb
Host Species	Recombinant Rabbit
Clonality	Monoclonal antibody
Clone No.	S04-8B4
Isotype	Rabbit IgG
Purification	Affinity Purified
Applications	WB
Species Reactivity	Human
Immunogen Description	A synthetic peptide of human MSH2
Conjugates	Unconjugated
Modification	Unmodification
Other Names	mutS homolog 2;FCC1; COCA1; HNPCC; LCFS2; HNPCC1
Accession No.	Swiss-Prot:P43246GeneID:4436
Uniprot	P43246
GeneID	4436
Calculated MW	Calculated MW: 105 kDa; Observed MW: 105 kDa
Concentration	0.3 mg/ml
Formulation	50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40% Glycerol, 0.01% Sodium azide and 0.05% BSA
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Application Details

WB: 1/2000;

Images



Western blot detection of MSH2 in Rat Brain,CHO-K1,Hela cell lysates using MSH2 Rabbit mAb(1:1000 diluted).Predicted band size:105kDa.Observed band size:105kDa.

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. Recruits DNA helicase MCM9 to chromatin which unwinds the mismatch containing DNA strand (PubMed:26300262).

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.

Note: This product is for in vitro research use only