Data Sheet (Cat.No.TMAH-00785)

TargetMol

Anti-MSH6 Antibody (5V942)

Product Details

Ig Type:	IgG
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	5V942
Purification:	Protein G purified

Applications

Verified Activity:	Immunohistochemical of paraffin-embedded Human lung cancer tissue using TMAH-00785 at dilution of 1:200.
Application:	ELISA, IHC

Properties

Purity:	>95%
Stability & Storage:	Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen:	Recombinant Protein: Human MSH6 Protein
Antigen Species:	Human
Gene ID:	2956
Uniprot ID:	P52701
Synonyms:	GTMBP;G/T mismatch binding protein;mutS homolog 6;p160;hMSH6;HNPCC 5;Sperm associated protein;mutS (E. coli) homolog 6;HNPCC5;DNA mismatch repair protein Msh6;HSAP; GTBP;MSH 6;MutS alpha 160 kDa subunit;MutS-alpha 160 kDa subunit
Biology Area:	Epigenetics and Nuclear Signaling

Research 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-->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.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481