MLH3 (DNA Mismatch Repair Protein Mlh3, MutL Protein Homolog 3, MLH3)

Catalog number

224206

Supplier

United States Biological

DNA mismatch repair (MMR) is essential for maintaining the integrity of the genome during replication. This process is highly conserved across bacterial and eukaryotic systems, as many of the genes expressed in bacteria are closely related to the yeast and mammalian homologs. In bacteria two proteins, MutS and MutL, form homodimeric complexes that are responsible for recognizing and facilitating MMR. Human homologs of these proteins include MSH2 and MSH3 (MutS homolog 2 and 3), and the corresponding human homologs of MutL are MLH1, PMS1, PMS2 and MLH3. MSH2 and MSH3
form heterodimers that cooperatively mediate MMR. MLH3 preferentially dimerizes with MLH1 to repair DNA mismatches and restore the stability to the genome. Mutations in the genes encoding MSH2 and MLH1 induce microsatellite instablitiy of the DNA. These mutations are associated with the occurrence of hereditary nonpolyposis colorectal cancer (HNPCC) and are a common feature in the progression of many other cancers.

Applications

Suitable for use in Western Blot, Immunohistochemistry. Other applications not tested.

Recommended Dilution

Western Blot: 1:500-1:1000
Immunohistochemistry: 1:50-1:200
Optimal dilutions to be determined by the researcher.

Storage and Stability

May be stored at 4°C for short-term only. Aliquot to avoid repeated freezing and thawing. Store at -20°C. Aliquots are stable for 12 months after receipt. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap.

Immunogen

Synthetic peptide corresponding to amino acids 513-563 of Human MLH3.

Formulation

Supplied as a liquid PBS, 0.05% sodium azide, pH 7.2.

Purity

Purified by immunoaffinity chromatography.

Specificity

Recognizes endogenous levels of MLH3. Species Crossreactivity: Human, mouse, rat

Product Type

Pab

Source

human

Isotype

IgG

Grade

Affinity Purified

Applications

IHC WB

Crossreactivity

Hu Mo Rt

Storage

-20°C

MW

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