MLH1 Blocking Peptide – >85% Purity

PRODUCT OVERVIEW

Product Name	MLH1, Blocking Peptide
Full Product Name	MLH1 Blocking Peptide
Product Gene Name	MLH1 blocking peptide
Product Synonym Names	COCA2; DNA mismatch repair protein Mlh1; MutL protein homolog 1
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	>85%
Preparation and Storage	Shipped at 4 degree C. Store at -20 degree C for one year.
Antibody/Peptide Pairs	MLH1 peptide (MBS822424) is used for blocking the activity of MLH1 antibody (MBS821693)
Molecular Weight	73,837 Da
OMIM	phenotype 609310
Quality Control	The quality of the peptide was evaluated by reversed-phase HPLC and by mass spectrometry.
Applications Tested/Suitable for MLH1 blocking peptide	Blocking (BL)
Application Notes for MLH1 blocking peptide	Blocking Peptide to the diluted primary antibody in a molar ratio of 10:1 (peptide to antibody) and incubate the mixture at 4 degree C for overnight or at room temperature for 2 hours.
Related Product Information for MLH1 blocking peptide	MBS822424 is a blocking peptide targeting MLH1. Reactive in Human. Host: Synthetic. The peptide is used to block Anti-MLH1 Antibody reactivity.
Other Notes	Small volumes of MLH1 blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for MLH1. It may not necessarily be applicable to this product.

NCBI GI #	4557757
NCBI GeneID	4292
NCBI Accession #	NP_000240.1
UniProt Primary Accession #	P40692
UniProt Secondary Accession #	B4DI13; B4DQ11; E9PCU2
UniProt Related Accession #	P40692
GenBank Nucleotide #	NM_000249.3
NCBI Official Full Name	DNA mismatch repair protein Mlh1 isoform 1
NCBI Official Synonym Full Names	mutL homolog 1

NCBI Official Symbol	MLH1
NCBI Official Synonym Symbols	FCC2; COCA2; HNPCC; hMLH1; HNPCC2
UniProt Protein Name	DNA mismatch repair protein Mlh1
UniProt Synonym Protein Names	MutL protein homolog 1
Protein Family	DNA mismatch repair protein
UniProt Gene Name	MLH1
UniProt Synonym Gene Names	COCA2
UniProt Entry Name	MLH1_HUMAN
NCBI Protein Information	DNA mismatch repair protein Mlh1; mutL homolog 1, colon cancer, nonpolyposis type 2
NCBI Summary for MLH1	This gene was identified as a locus frequently mutated in hereditary nonpolyposis colon cancer (HNPCC). It is a human homolog of the E. coli DNA mismatch repair gene mutL, consistent with the characteristic alterations in microsatellite sequences (RER+phenotype) found in HNPCC. Alternative splicing results in multiple transcript variants encoding distinct isoforms. Additional transcript variants have been described, but their full-length natures have not been determined.[provided by RefSeq, Nov 2009]
UniProt Comments for MLH1	MLH1: a protein involved in the repair of mismatches in DNA. Binds PMS2 or MLH1 and MLH3. Part of the BRCA1-associated genome surveillance complex (BASC), which contains BRCA1, MSH2, MSH6, MLH1, ATM, BLM, PMS2 and the RAD50- MRE11-NBS1 protein complex. This association could be a dynamic process changing throughout the cell cycle and within subnuclear domains. Interacts with MBD4. Interacts with EXO1. Defects in MLH1 are the cause of hereditary non-polyposis colorectal cancer type 2; Turcot syndrome, an autosomal dominant disorder characterized by malignant tumors of the brain; Muir-Torre syndrome (MTS), a rare autosomal dominant disorder characterized by sebaceous neoplasms and visceral malignancy; lobular carcinoma in situ; endometrial cancer; and non-polyposis colorectal cancer. Protein type: DNA repair, damage; Tumor suppressor Chromosomal Location of Human Ortholog: 3p21.3 Cellular Component: male germ cell nucleus; nucleoplasm; MutLalpha complex; chiasma; membrane; synaptonemal complex; nucleus Molecular Function: protein binding; ATPase activity; guanine/thymine mispair binding; MutSalpha complex binding; single-stranded DNA binding; ATP binding Biological Process: oogenesis; poly(A) tail shortening; meiotic metaphase I plate congression; mismatch repair; DNA damage response, signal transduction resulting in induction of apoptosis; synapsis; somatic hypermutation of immunoglobulin genes; negative regulation of mitotic recombination; male meiosis chromosome segregation; isotype switching; resolution of meiotic joint molecules as recombinants; spermatogenesis; spindle midzone assembly involved in meiosis; DNA repair; double-strand break repair via nonhomologous end joining Disease: Muir-torre Syndrome; Colorectal Cancer, Hereditary Nonpolyposis, Type 2; Mismatch Repair Cancer Syndrome
Research Articles on MLH1	**1.** MLH1 or PMS2 knockdown confered TMZ resistance. In recurrent GBM tumours, the expression of MLH1 and PMS2 was reduced when compared to primary tumours.
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