

Recombinant Human MLH1 Protein, Myc/DDK-tagged, C13 and N15-labeled

Cat. No. MLH1-2320H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	MLH1 MS Standard C13 and N15-labeled recombinant protein (NP_000240) with a C-terminal MYC/DDK tag, was expressed in HEK293 cells.
Species	Human
Source	HEK293
Description	The protein encoded by this gene can heterodimerize with mismatch repair endonuclease PMS2 to form MutL alpha, part of the DNA mismatch repair system. When MutL alpha is bound by MutS beta and some accessory proteins, the PMS2 subunit of MutL alpha introduces a single-strand break near DNA mismatches, providing an entry point for exonuclease degradation. The encoded protein is also involved in DNA damage signaling and can heterodimerize with DNA mismatch repair protein MLH3 to form MutL gamma, which is involved in meiosis. This gene was identified as a locus frequently mutated in hereditary nonpolyposis colon cancer (HNPCC).
Molecular Mass	84.6 kDa
AA Sequence	MSFVAGVIRRLDETVDNRIAGGEVIQRPANAIKEMIENCLDAKSTSIQVIVKEGGLKLIQ IQDNGTGIRKEDLDIVCERFTTSKLQSFEDLASISTYGFRGEALASISHVAHVTTITTKTA DGKCAIRASYSDGKLKAPPKPCAGNQGTQITVEDLFYNIATRRKALKNPSEEEYGKIL EVLGRYSVHNAGISFSVKKQGETVADVRTLPNASTVDNIRSIFGNAVSRELIEIGCED

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KTLAFKMNGYISNANYSVKKCIFLLFINHRLVESTSLRKAIVTVYAAAYLPKNTHPFLYLS
 LEISPQNVDVNVHPTKHEVHFLHEESILERVQQHIESKLLGSSSRMYFTQTLLPGLA
 GPSGEMVKSTTSLTSSSTSGSSDKVYAHQMVRTDSREQKLDAFLQPLSKPLSSQPQ
 AIVTEDKTDISSGRARQQDEEMLELPAPAEVAAKNQSLEGDTTKGTSEMSEKRGPT
 SSNPRKRHREDSDEVEMVEDDSRKEMTAACTPRRRIINLTSVLSLQEEINEQGHEVLR
 EMLHNHSFVGCVNPQWALAQHQTKLYLLNTTKLSEELFYQILIYDFANFGVLRRLSEP
 APLFDLAMLALDSPESGWTEEDGPKEGLAEYIVEFLKKAEMLADYFSLEIDEEGNLI
 GLPLLIDNYVPPLEGLPIFILRLATEVNWDEEKECFESLSKECAMFYSIKQYISEESTL
 SGQQSEVPGSIPNSWKWTVEHIVYKALRSHILPPKHFTEDGNILQLANLPDLYKVFER
 CTRTRPLEQKLISEEDLAANDILDYKDDDDKV

Purity > 80% as determined by SDS-PAGE and Coomassie blue staining

Stability Stable for 3 months from receipt of products under proper storage and handling conditions.

Storage Store at -80 centigrade. Avoid repeated freeze-thaw cycles.

Concentration 50 µg/mL as determined by BCA

Storage Buffer 100 mM glycine, 25 mM Tris-HCl, pH 7.3.

GENE INFORMATION

Gene Name MLH1 mutL homolog 1 [Homo sapiens (human)]

Official Symbol MLH1

Synonyms MLH1; mutL homolog 1, colon cancer, nonpolyposis type 2 (E. coli); COCA2, mutL (E. coli) homolog 1 (colon cancer, nonpolyposis type 2); DNA mismatch repair protein Mlh1; FCC2; HNPCC; HNPCC2; COCA2; hMLH1; MGC5172;

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Gene ID	4292
mRNA Refseq	NM_000249
Protein Refseq	NP_000240
MIM	120436
UniProt ID	P40692
SDS-PAGE	