abcam

Product datasheet

Recombinant human MLH3 protein ab198631

2 Images

Description

Product name	Recombinant human MLH3 protein
Biological activity	Specific activity: 0.766 pmol/min/µg Assay Conditions: Reaction was performed in 50 mM Tris pH 7.4, 1 mM DTT, 0.5 mM EDTA, 500 nM Ub-AMC, and various amount of ab198631 in a volume of 50 µL. Reaction was incubated at 37°C for 30 min and fluorescent signal was measured at excitation of 360 nm, and emission at 460 nm.
Expression system	Baculovirus infected Sf9 cells
Accession	P21580
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Sequence	MDYKDDDDKAEQVLPQALYLSNMRKAVKIRERTPEDI FKPTNGIIHHFKT MHRYTLEMFRTCQFCPQFREIIHKALIDRNIQATLESQK KLNWCREVRKL VALKTNGDGNCLMHATSQYMWGVQDTDLVLRKALFS TLKETDTRNFKFRW QLESLKSQEFVETGLCYDTRNWNDEWDNLIKMASTDT PMARSGLQYNSLE EIHIFVLCNILRRPIIVISDKMLRSLESGSNFAPLKVGGIYL PLHWPAQE CYRYPIVLGYDSHHFVPLVTLKDSGPEIRAVPLVNRDR GRFEDLKVHFLT DPENEMKEKLLKEYLMVIEIPVQGWDHGTTHLINAAKL DEANLPKEINLV DDYFELVQHEYKKWQENSEQGRREGHAQNPMEPSV PQLSLMDVKCETPNC PFFMSVNTQPLCHECSERRQKNQNKLPKLNSKPGPE GLPGMALGASRGEA YEPLAWNPEESTGGPHSAPPTAPSPFLFSETTAMKCR SPGCPFTLNVQHN GFCERCHNARQLHASHAPDHTRHLDPGKCQACLQDV TRTFNGICSTCFKR

TTAEASSSLSTSLPPSCHQRSKSDPSRLVRSPSPHSC
HRAGNDAPAGCLS
QAARTPGDRTGTSKCRKAGCVYFGTPENKGFCTLCFI
EYRENKHFAAASG
KVSPTASRFQNTIPCLGRECGTLGSTMFEGYCQKCFIE
AQNQRFHEAKRT
EEQLRSSQRRDVPRTTQSTSRPKCARASCKNILACRS
EELCMECQHPNQR
MGPGAHRGEPAPEDPPKQRCRAPACDHFGNAKCNG
YCNECFQFKQMYGHH HHHH

Predicted molecular weight	91 kDa including tags
Amino acids	2 to 790
Tags	His tag C-Terminus , DDDDK tag N-Terminus

Specifications

Our Abpromise guarantee covers the use of **ab198631** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	SDS-PAGE Functional Studies
Form	Liquid

Preparation and Storage

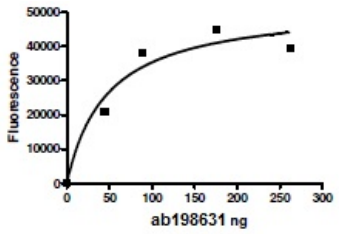
Stability and Storage	Shipped on Dry Ice. Store at -80°C. Avoid freeze / thaw cycle. pH: 8 Constituents: 0.63% Tris HCl, 64% Sodium chloride, 0.017% Potassium chloride, 0.04% Tween, 0.05% DTT, 20% Glycerol This product is an active protein and may elicit a biological response in vivo, handle with caution.

General Info

Function	Probably involved in the repair of mismatches in DNA.
Tissue specificity	Ubiquitous.
Involvement in disease	Defects in MLH3 are the cause of hereditary non-polyposis colorectal cancer type 7 (HNPCC7) [MIM:614385]. Mutations in more than one gene locus can be involved alone or in combination in the production of the HNPCC phenotype (also called Lynch syndrome). Most families with clinically recognized HNPCC have mutations in either MLH1 or MSH2 genes. HNPCC is an autosomal, dominantly inherited disease associated with marked increase in cancer susceptibility. It is characterized by a familial predisposition to early onset colorectal carcinoma (CRC) and extra-colonic cancers of the gastrointestinal, urological and female reproductive tracts. HNPCC is reported to be the most common form of inherited colorectal cancer in the Western world, and accounts for 15% of all colon cancers. Cancers in HNPCC originate within benign neoplastic polyps termed adenomas. Clinically, HNPCC is often divided into two subgroups. Type I: hereditary predisposition to colorectal cancer, a young age of onset, and carcinoma observed in the proximal colon. Type II: patients have an increased risk for cancers in certain tissues such as

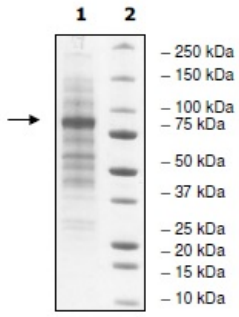
	the uterus, ovary, breast, stomach, small intestine, skin, and larynx in addition to the colon. Diagnosis of classical HNPCC is based on the Amsterdam criteria: 3 or more relatives affected by colorectal cancer, one a first degree relative of the other two; 2 or more generation affected; 1 or more colorectal cancers presenting before 50 years of age; exclusion of hereditary polyposis syndromes. The term 'suspected HNPCC' or 'incomplete HNPCC' can be used to describe families who do not or only partially fulfill the Amsterdam criteria, but in whom a genetic basis for colon cancer is strongly suspected. Defects in MLH3 are a cause of colorectal cancer (CRC) [MIM:114500].
Sequence similarities	Belongs to the DNA mismatch repair mutL/hexB family.
Cellular localization	Nucleus.

Images



Functional Studies - Recombinant human MLH3 protein (ab198631)

Specific activity of ab198631.



SDS-PAGE - Recombinant human MLH3 protein (ab198631)

4-20% SDS-PAGE analysis of ab198631 with Coomassie staining

Lane 1: 3 µg ab198631

Lane 2: Protein marker

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