

Product Name: Thermus aquaticus MutS DNA mismatch repair protein

Catalog #: EG-41

Description:

The Taq MutS DNA mismatch protein recognizes heteroduplex DNAs containing mispaired or unpaired bases. This Muts protein binds *in vitro* to heteroduplex DNAs containing mispaired or unpaired bases over a wide temperature range from 4 to 70 °C and has a thermostable ATPase activity. This thermostable Taq MutS is active at temperature between 0 to 75°C. Since Taq MutS efficiently binds to 1-4 bases deletion (or insertion) and mismatch base pairs of GT, CT and AG, it is useful for detecting these mutations. Mutations can be detected in polyacrylamide gels or on a solid phase such as Ni agarose or beads or magnetic Ni-NTA particles.

Product Type: Purified recombinant protein

Source: *E. coli*.

Fusion: 6XHis tag at **C-terminus**

Gene Name: Thermus aquaticus MutS DNA mismatch repair protein

Accession #: AAC43637, TAU3311, U33117

GI: 1203807

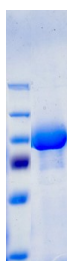
Purification Methods: FPLC

Purity: >95%

Storage: -20 °C

Storage Buffer: PBS Buffer with 50% Glycerol

QC: SDS-PAGE



MW

92.8 kDa

Protein
Sequence

MKIEHMEGMLKGE GPGPLPPLLQQYVELRDQYPDYLLLFQVGDFYECFGEDAERLARALG
LVLTHKTSKDFTPMAGIPLRAFEAYAERLLKMGFRLAVADQVEPAEEAEGLVRRVETQL
LTPGTLLQESLLPREANYLAAIATGDGWGLAFLDVSTGEFKGTVLKSALYDELFRHRP
AEVLLAPELLENGAFLDEFKRFPVMLSEAPFEPEGEGPLALRRARGALLAYAQRTQGGA
LSLQPFRRFYDPGAFMRLPEATLRALEVFEPLRGQDTLFSVLDETRTAPGRRLLSWLRHP
LLDRGPLEARLDRVEGFVREGALREGVRRLLYRLADLERLATRLELGRASPKDLGALRRS
LQILPELRALLGEEVGLPDLSPLKEELEAALVEDPPLKVSEGGLIREGYDPDLALRAAH
REGVAYFLELEERERERTGIPTLKVGYNVFGYYLEVTRPYYERVVPKEYRPVQTLKDRQR

YTLPEMKEKEREVYRLEALIRRREEEVFLEVRERAKRQAEALREAARILAEALDVYAALAE
VAVRYGYVRPRFGDRLQIRAGRHPVVERRTEFVPNDLEMAHELVLITGPNMAGKSTFLRQ
TALIALLAQVGSFVPAEEAHLPLFDGIYTRIGASDDLGGKSTFMVEMEEVALILKEATE
NSLVLLDEVGRGTSSLDGVAIATAVAEALHERRAYTLFATHYFELTALGLPRLKNLHVAA
REEAGGLVFYHQVLPGPASKSYGVEVAAMAGLPKEVVARARALLQAMAARREGALDAVLE
RLALDLPDRLTPLEALRLLQELKALALGAPLDTMKGKLAAALEHHHHHH

Applications:

- Remove mismatch DNA (error correction) from gene synthesis reaction
- Mutation detection and removal
- Rapid isothermal SNP detection

Ref:

1. Protein-mediated error correction for *de novo* DNA synthesis. [Nucleic Acids Res.](#) 2004 Nov 23;32(20):e162.
2. Correcting errors in synthetic DNA through consensus shuffling. [Nucleic Acids Res.](#) 2005 Mar 30;33(6):e55.
3. MutS as a tool for mutation detection. [Acta Biochim Pol.](#) 2005;52(3):575-83. Epub 2005 Aug
4. One tube mutation detection using sensitive fluorescent dyeing of MutS protected DNA. [Nucleic Acids Res.](#) 2000 Apr 15;28(8):E36.