

Datasheet for ABIN7554632  
**MSH6 Protein (AA 1-1360) (His tag)**



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## Overview

Quantity:	1 mg
Target:	MSH6
Protein Characteristics:	AA 1-1360
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This MSH6 protein is labelled with His tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB)

## Product Details

Purpose:	Custom-made recombinat MSH6 Protein expressed in mammalien cells.
Sequence:	MSRQSTLYSF FPKSPALSDA NKASARASRE GGRAAAAPGA SPSPGGDAAW SEAGPGPRPL ARSASPPKAK NLNGGLRRSV APAAPTSCDF SPGDLVWAKM EGYPWWPCLV YNHFPDGTFI REK GKSVRVH VQFFDDSPTR GWVSKRLLKP YTGSKSKEAQ KGGHFYSAKP EILRAMQRAD EALNKDKIKR LELAVCDEPS EPEEEEEEMEV GTTYVTDKSE EDNEIESEEE VQPKTQGSRR SSRQIKKRRV ISDSESDIGG SDVEFKPDTK EEGSSDEISS GVG DSESEGL NSPVKVARKR KRMVTGNGSL KRKSSRKETP SATKQATSIS SETKNTLRAF SAPQNSQSQA HVSGGGDDSS RPTVWYHETL EWLKEEKRRD EHRRRPDHPD FFASTLYVPE DFLNSCTPGM RKWWQIKSQN FDLVICYKVG KFYELYHMDA LIGVSELGLV FMKGNWAHSG FPEIAFG RYS DSLVQKGYKV ARVEQTETPE MMEARCRKMA HISKYDRVVR REICRIITKG TQTYSVLEGD PSENYSKLL SLKEKEEDSS GHTRAYGVCF VDTSLGKFFI GQFSDDRHC S RFRTLVAHYP PVQVLF EKGN LSKETKTILK SSLSCSLQEG LIPGSQF WDA SKTLRTLLEE EYFREKLSDG IGVMLPQVLK

GMTSESDSIG LTPGEKSELA LSALGGCVFY LKKCLIDQEL LSMANFEEYI PLSDTVSTT  
RSGAIFTKAY QRMVLDAVTL NNLEIFLNGT NGSTEGTLE RVDTCHTPFG KRLLKQWLCA  
PLCNHYAIND RLDAIEDLMV VPKISEVVE LLKLPDLER LLSKIHNVGS PLKSQNHPS  
RAIMYEETTY SKKKIIDFLS ALEGFKVMCK IIGIMEEVAD GFKSKILKQV ISLQTKNPEG  
RFPDLTVELN RWDTAFDHEK ARKTGLITPK AGFDSYDQA LADIRENEQS LLEYLEKQRN  
RIGCRTIVYW GIGRNRYQLE IPENFTTRNL PEEYELKSTK KGCKRYWTKT IEKLANLIN  
AEERRDVSLK DCMRRLFYNF DKNYKDWQSA VECIAVLV LCLANYSRGG DGPMCRPVIL  
LPEDTPPFLE LKGSRHPCIT KTFFGDDFIP NDILIGCEEE EQENGKAYCV LVTGPNMGGK  
STLMRQAGLL AVMAQMGCYV PAEVCRLTPI DRVFTRLGAS DRIMSGESTF FVELSETASI  
LMHATAHSLV LVDELGRGTA TFDGTAIANA VKELAETIK CRTLFSTHYH SLVEDYSQNV  
AVRLGHMACM VENECEDPSQ ETITFLYKFI KGACPKSYGF NAARLANLPE EVIQKGHRKA  
REFEKMNQSL RLFREVCLAS ERSTVDAEAV HKLLTLIKEL **Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**

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### Characteristics:

#### Key Benefits:

- Made to order protein - from design to production - by highly experienced protein experts.
- Protein expressed in mammalian cells and purified in one-step affinity chromatography
- The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.

If you are not interested in a full length protein, please contact us for individual protein fragments.

The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

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Purity: > 90 % as determined by Bis-Tris Page, Western Blot

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Grade: custom-made

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## Target Details

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Target: MSH6

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## Target Details

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Alternative Name: [MSH6 \(MSH6 Products\)](#)

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Background: DNA mismatch repair protein Msh6 (hMSH6) (G/T mismatch-binding protein) (GTBP) (GTMBP) (MutS protein homolog 6) (MutS-alpha 160 kDa subunit) (p160),FUNCTION: Component of the post-replicative DNA mismatch repair system (MMR). Heterodimerizes with MSH2 to form MutS alpha, which binds to DNA mismatches thereby initiating DNA repair. When bound, MutS alpha bends the DNA helix and shields approximately 20 base pairs, and recognizes single base mismatches and dinucleotide insertion-deletion loops (IDL) in the DNA. After mismatch binding, forms a ternary complex with the MutL alpha heterodimer, which is thought to be responsible for directing the downstream MMR events, including strand discrimination, excision, and resynthesis. ATP binding and hydrolysis play a pivotal role in mismatch repair functions. The ATPase activity associated with MutS alpha regulates binding similar to a molecular switch: mismatched DNA provokes ADP-->ATP exchange, resulting in a discernible conformational transition that converts MutS alpha into a sliding clamp capable of hydrolysis-independent diffusion along the DNA backbone. This transition is crucial for mismatch repair. MutS alpha may also play a role in DNA homologous recombination repair. Recruited on chromatin in G1 and early S phase via its PWWP domain that specifically binds trimethylated 'Lys-36' of histone H3 (H3K36me3): early recruitment to chromatin to be replicated allowing a quick identification of mismatch repair to initiate the DNA mismatch repair reaction.

{ECO:0000269|PubMed:10078208, ECO:0000269|PubMed:10660545, ECO:0000269|PubMed:15064730, ECO:0000269|PubMed:21120944, ECO:0000269|PubMed:23622243, ECO:0000269|PubMed:9564049, ECO:0000269|PubMed:9822679, ECO:0000269|PubMed:9822680}.

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Molecular Weight: 152.8 kDa

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UniProt: [P52701](#)

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Pathways: [DNA Damage Repair, Chromatin Binding, Production of Molecular Mediator of Immune Response](#)

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## Application Details

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Application Notes: In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

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Restrictions: For Research Use only

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## Handling

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Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months