Methylcytosine Dioxygenase TET2 (TET2) Mouse Recombinant Protein

PRODUCT OVERVIEW

Product Name	Methylcytosine dioxygenase TET2 (Tet2), Recombinant Protein
Full Product Name	Recombinant Mouse Methylcytosine dioxygenase TET2 (Tet2) , partial
Product Gene Name	Tet2 recombinant protein
Product Synonym Gene Name	Tet2
Sequence	RISLVLYRHK NLFLPKHCLA LWEAKMAEKA RKEEECGKNG SDHVSQKNHG KQEKREPTGP QEPSYLRFIQ SLAENTGSVT TDSTVTTSPY AFTQVTGPYN TFV
Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)
Preparation and Storage	Store at -20 degrees C. For long-term storage, store at -20 degrees C or -80 degrees C. Store working aliquots at 4 degrees C for up to one week. Repeated freezing and thawing is not recommended.
Molecular Weight	27.0 kDa
Sequence Positions	1810-1912. Fragment at the C-terminal.
Tag Information	This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information.
Sterility	Sterile filter available upon request.
Endotoxin	Low endotoxin available upon request.
3D Structure	ModBase 3D Structure for Q4JK59
Species	Mouse
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for Tet2 recombinant protein	MBS1330723 is a recombinant protein targeting Tet2. Also known as Recombinant Mouse Methylcytosine dioxygenase TET2 (Tet2) , partial. Host: E Coli or Yeast or Baculovirus or Mammalian Cell.
Other Notes	Small volumes of Tet2 recombinant protein 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 Tet2. It may not necessarily be applicable to this product.

NCBI GI #	157057152
NCBI GeneID	214133
NCBI Accession #	NP_001035490.2
UniProt Primary Accession #	Q4JK59
UniProt Secondary Accession #	Q3U5R5; Q3U633; Q3UAI0; Q6ZPN2; Q8K2K3
UniProt Related Accession #	Q4JK59

GenBank Nucleotide #	NM_001040400.2
NCBI Official Full Name	methylcytosine dioxygenase TET2 isoform 1
NCBI Official Synonym Full Names	tet methylcytosine dioxygenase 2
NCBI Official Symbol	Tet2
NCBI Official Synonym Symbols	Ayu17-449; mKIAA1546; E130014J05Rik
UniProt Protein Name	Methylcytosine dioxygenase TET2
UniProt Synonym Protein Names	Protein Ayu17-449
Protein Family	Methylcytosine dioxygenase
UniProt Gene Name	Tet2
UniProt Synonym Gene Names	Kiaa1546
NCBI Protein Information	methylcytosine dioxygenase TET2
UniProt Comments for Tet2	Dioxygenase that catalyzes the conversion of the modified genomic base 5-methylcytosine (5mC) into 5-hydroxymethylcytosine (5hmC) and plays a key role in active DNA demethylation. Has a preference for 5-hydroxymethylcytosine in CpG motifs. Also mediates subsequent conversion of 5hmC into 5-formylcytosine (5fC), and conversion of 5fC to 5-carboxylcytosine (5caC). Conversion of 5mC into 5hmC, 5fC and 5caC probably constitutes the first step in cytosine demethylation. Methylation at the C5 position of cytosine bases is an epigenetic modification of the mammalian genome which plays an important role in transcriptional regulation. In addition to its role in DNA demethylation, also involved in the recruitment of the O-GlcNAc transferase OGT to CpG-rich transcription start sites of active genes, thereby promoting histone H2B GlcNAcylation by OGT.
Research Articles on Tet2	**1.** we identified that TET2 was downregulated during the pathogenesis of atherosclerosis. The downregulation of TET2 promotes the methylation of the Beclin 1 promoter, leading to endothelial cell autophagy, impaired autophagic flux, and inflammatory factor upregulation.
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