

TET2 recombinant protein

Recombinant TET2 (1129-2002) protein

CATALOG # AAA59669	HOST Baculovirus
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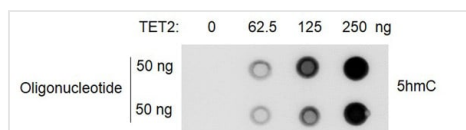
PRODUCT SYNONYMS

TET2; Recombinant TET2 (1129-2002) protein; MDS; KIAA1546; TET2 recombinant protein

PRODUCT SPECIFICATIONS

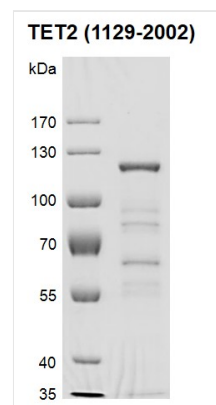
Host	Baculovirus
Form/Format	Recombinant TET2 (1129-2002) protein is supplied in 25mM HEPESNaOH pH7.5, 300mM NaCl, 10% glycerol, 0.04% Triton X-100, and 0.5mM TCEP.
Protein Species	Human
Tag	DYKDDDDK-Tag, His-Tag
Notes	This product was manufactured as described in Protein Details. Where possible, We has developed functional or activity assays for recombinant proteins. Additional characterization such as enzyme kinetic activity assays, inhibitor screening or other biological activity assays may not have been performed for every product. All available data for a given product is shown on the lot-specific Technical Data Sheet.
Dry Ice Note	The product may be shipped with dry ice, and an additional fee may be added to your shipping cost.
Preparation and Storage	Recombinant proteins in solution are temperature sensitive and must be stored at -80 degree C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. Shipping Temp: Dry Ice

IMAGES



Application Data

Recombinant TET2 (1129-2002) activity assay 500 nM of 30 bp dsDNA oligos (sequence: 5'-CAGTAACTGTGGTC/5mC/CGTAACTGACTTGCA-3') were incubated with different concentrations of TET2 (1129-2002) protein in a 20 μ l reaction system containing 50 mM HEPES pH 7.9, 50 μ M Fe(NH₄)₂(SO₄)₂, 100 μ M ascorbate, 100 μ M alpha-ketoglutarate, 100 μ M ATP, 1 mM TCEP at room temperature for 2 hours. 20 μ l reaction product was concentrated to 50 μ l, then 1 μ l product was spotted onto positively charged nylon membrane. 5hmC antibody was used to detect the generation of products.



SDS-PAGE

Recombinant TET2 (1129-2002) protein gel. Recombinant TET2 was run on a 10% SDS-PAGE gel and stained with Coomassie Blue. MW: 102.7 kDa Purity: >45%

ADDITIONAL INFORMATION

Related Product Information for TET2 recombinant protein	Short Description: Recombinant TET2 (1129-2002) protein that includes amino acids 1129-2002 of human TET2 protein (accession number NP_001120680.1) was expressed in Sf9 cells and contains an N-terminal 6xHis-tag and DYKDDDDK-Tag with a molecular weight of 102.7 kDa. The purity of the protein is >70% by SDS-PAGE. It is suitable for use in cytosine oxygenase assays, enzyme kinetics, inhibitor screening, and selectivity profiling. Background: TET (Ten Eleven Translocation) family proteins are cytosine oxygenases that catalyze the conversion of 5-methylcytosine (5mC) into 5-hydroxymethylcytosine (5hmC). 5hmC can be further oxidized into 5-formylcytosine (5fC) and 5-carboxylcytosine (5caC) by TET proteins. Methylation at the C5 position of cytosine is an epigenetic modification of the mammalian genome that plays an important role in transcriptional regulation. TET proteins are responsible for initiating the enzymatic deamination process leading to cytosine demethylation. TET2 plays an important role in normal myelopoiesis. Somatic loss-of-function mutations in TET2 gene frequently occur in patients with myeloid malignancies. TET2 loss increased hematopoietic stem cell self-renewal and myeloid transformation. TET2 promotes histone O-GlcNAcylation during gene transcription in embryonic stem cells. In addition, TET2 can be recruited to chromatin by CXXC domain protein IDAX. IDAX downregulates TET2 protein by activating caspase pathway.
Product Categories/Family for TET2 recombinant protein	Recombinant Proteins; Cytosine Oxygenase (TET)

NCBI AND UNIPROT INFORMATION

NCBI GI #	187761317
NCBI GeneID	54790
NCBI Accession #	NP_001120680.1; NP_060098.3
NCBI GenBank Nucleotide #	NM_001127208.2
Molecular Weight	133,481 Da
NCBI Official Full Name	methylcytosine dioxygenase TET2 isoform a
NCBI Official Synonym Full Names	tet methylcytosine dioxygenase 2
NCBI Official Symbol	TET2
NCBI Official Synonym Symbols	MDS; KIAA1546
NCBI Protein Information	methylcytosine dioxygenase TET2

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.