Active Recombinant Human TET1 Protein, His&Flag tagged

Cat. No. TET1-28H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant TET1 (1418-2136) protein that includes amino acids 1418-2136 of human TET1 (accession number NP_085128.2) was expressed in a baculovirus expression system and contains an N-terminal 6×His Tag and FLAG-Tag with a molecular weight of 84.3 kDa.
Species	Human
Source	Insect Cells
ProteinLength	1418-2136 aa
Description	ET (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. TET1 preferentially binds to CpG-rich sequences at the promoters of both transcriptionally active and Polycomb-repressed genes and modulates gene silencing induced by cytosine methylation by controlling the levels of 5-mC and 5-hmC at gene promoters. TET1 may have the dual function of repressing the expression of a subset of genes through recruitment of transcriptional repressors to promoters. TET1 is important for stem cell maintenance and specification and is involved in the balance between pluripotency and lineage

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

	commitment. TET1 plays an important role in regulating adult hippocampal neurogenesis and cognition
Form	Recombinant TET1 (1418-2136) protein is supplied at a concentration of 0.2 pg/μL in 25 mM HEPES pH 7.5, 300 mM NaCl, 5% glycerol, 0.04% Triton X-100, 0.2 mM TCEP.
Molecular Mass	84.3 kDa
Purity	The purity of the protein is > 75% by SDS-PAGE.
Applications	Recombinant TET1 (1418-2136) protein is suitable for use in cytosine oxygenase assays, enzyme kinetics, inhibitor screening, and selectivity profiling. TET Activity Assay Conditions: 250 nM of 30 bp DNA oligos (sequence: 5'-CAGTAACTGTGGTC(mC)GGTAACTGACTTGCA-3', contains a 5mCpG site) was incubated with 100 nM recombinant TET1 (1418-2136) protein in buffer containing 50 mM HEPES, pH 8.0, 100 μM Fe(NH4)2(SO4)2, 2 mM ascorbate, 1 mM alpha-ketoglutarate, 1 mM ATP, 1 mM TCEP at 37 centigrade for 1 hr. Activity was detected by Dot-blot.
Storage	Recombinant proteins in solution are temperature sensitive and must be stored at -80 centigrade to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage.
Concentration	0.2 μg/μL
Reference	1. Huang, Y. et. al.(2019). Cancer Cell. 35(4):677-691. PMID: 30991027.

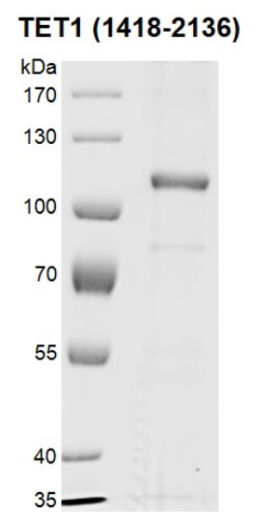
GENE INFORMATION

Gene Name	TET1 tet methylcytosine dioxygenase 1 [Homo sapiens (human)]

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

Official Symbol	TET1
Synonyms	TET1; tet methylcytosine dioxygenase 1; LCX; CXXC6; bA119F7.1; methylcytosine dioxygenase TET1; CXXC finger 6; CXXC zinc finger 6; CXXC-type zinc finger protein 6; leukemia-associated protein with a CXXC domain; ten-eleven translocation 1 gene protein; ten-eleven translocation-1; tet oncogene 1; EC 1.14.11.80
Gene ID	80312
mRNA Refseq	NM_030625
Protein Refseq	NP_085128
MIM	607790
UniProt ID	Q8NFU7
Activity	

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

SDS-PAGE	 Recombinant TET1 (1418-2136) protein gel. Recombinant TET1 (1418-2136) protein was run on an 8% SDS-PAGE gel and stained with Coomassie blue.

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA