

Recombinant TET3 (824-1795) protein

Catalog No: 31421, 31821

Expressed In: Baculovirus

Quantity: 10 µg

Concentration: 0.1 µg/µl

Source: Human

Buffer Contents: Recombinant TET3 (824-1795) protein is supplied at a concentration of 0.1 µg/µl in 25 mM Hepes pH 7.5, 300 mM NaCl, 5% Glycerol, 0.04% Triton X-100, 0.2 mM TCEP and 0.2 mg/ml 3× Flag peptide.

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.

TET3 plays an important role in DNA methylation reprogramming processes in the mammalian zygote. TET3 may also contribute to somatic cell nuclear reprogramming during animal cloning. Both of CXXC domain and catalytic domain are important for TET3 regulating key genes of Xenopus eye and neural development.

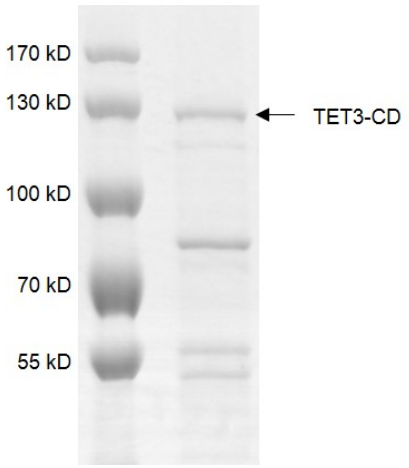
Protein Details: Recombinant TET3 (824-1795) protein that includes amino acids 824-1795 of human TET3 protein (accession number NP_001274420.1) was expressed in Sf9 cells and contains an N-terminal 6×His and Flag tag with a molecular weight of 111.3 kDa. The recombinant protein is >30% pure by SDS-PAGE.

Application Notes: Recombinant TET3 (824-1795) protein is suitable for use in cytosine oxygenase assays, enzyme kinetics, inhibitor screening, and selectivity profiling.

TET Activity Assay Conditions: 250 nM of 30bp DNA oligos (sequence: 5'-CAGTAACTGTGGTC(mC)GGTAACTGACTTGCA-3', contains a 5mCpG site) was incubated with 100 nM recombinant TET3 (824-1795) 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 37C for 1 hr. Activity was detected by Dot-blot.

Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is guaranteed for 6 months from date of receipt.

This product is for research use only and is not for use in diagnostic procedures.



Recombinant TET3 (824-1795) protein gel.

Recombinant TET3 (824-1795) protein was run on an 8% SDS-PAGE gel and stained with Coomassie blue.

Recombinant TET3 (824-1795) protein activity assay

Recombinant TET3 (824-1795) protein activity was measured using TET activity assay and detected by Dot-blot.

