10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

(Mouse) Tet1 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21235b

Product Information

Application	WB, E
Primary Accession	Q3URK3
Reactivity	Mouse
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB52496
Calculated MW	222945

Additional Information

Gene ID	52463
Target/Specificity	This mouse Tet1 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 1845-1879 amino acids from the C-terminal region of mouse Tet1.
Dilution	WB~~1:2000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	(Mouse) Tet1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Tet1
Synonyms	Cxxc6, Kiaa1676
Function	Dioxygenase that plays a key role in active DNA demethylation, by catalyzing the sequential oxidation of the modified genomic base 5-methylcytosine (5mC) into 5-hydroxymethylcytosine (5hmC), 5-formylcytosine (5fC), and 5-carboxylcytosine (5caC) (PubMed:20639862, PubMed:21496894, PubMed:21778364). In addition to its role in DNA demethylation, plays a more general role in chromatin regulation by recruiting histone modifying

protein complexes to alter histone marks and chromatin accessibility, leading to both activation and repression of gene expression (PubMed:28504700, PubMed:32286661). Plays therefore a role in many biological processes, including stem cell maintenance, T- and B-cell development, inflammation regulation, iron homeostasis, neural activity or DNA repair (PubMed:20639862, PubMed:31089182, PubMed:32855402, PubMed:33895792). Involved in the balance between pluripotency and lineage commitment of cells it plays a role in embryonic stem cells maintenance and inner cell mass cell specification (PubMed:20639862, PubMed:28504700). Together with QSER1, plays an essential role in the protection and maintenance of transcriptional and developmental programs to inhibit the binding of DNMT3A/3B and therefore de novo methylation (By similarity). May play a role in the pancreatic beta-cell specification during development. In this context, may function as an upstream epigenetic regulator of PAX4 presumably through direct recruitment by FOXA2 to a PAX4 enhancer to preserve its unmethylated status, thereby potentiating PAX4 expression to adopt beta-cell fate during endocrine lineage commitment (By similarity). Under DNA hypomethylation conditions, such as in female meiotic germ cells, may induce epigenetic reprogramming of pericentromeric heterochromatin (PCH), the constitutive heterochromatin of pericentromeric regions. PCH forms chromocenters in the interphase nucleus and chromocenters cluster at the prophase of meiosis. In this context, may also be essential for chromocenter clustering in a catalytic activity-independent manner, possibly through the recruitment polycomb repressive complex 1 (PRC1) to the chromocenters (PubMed:34166371). During embryonic development, may be required for normal meiotic progression in oocytes and meiotic gene activation (PubMed:23151479). Binds preferentially to DNA containing cytidine- phosphate-guanosine (CpG) dinucleotides over CpH (H=A, T, and C), hemimethylated-CpG and hemimethylated-hydroxymethyl-CpG (By similarity).

Cellular Location

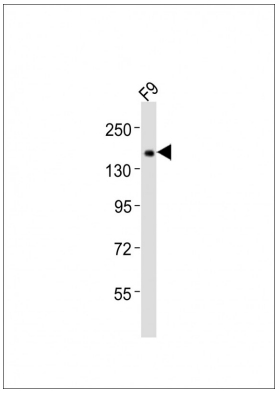
Nucleus. Chromosome [Isoform 2]: Nucleus. Chromosome. Note=During DNA replication, localizes to sites of ongoing DNA replication in heterochromatin (in late S phase) in an UHRF1- and CRL4(VprBP)-dependent manner, by ubiquitination of the conserved residue Lys-1537. Localization to heterochromatin is independent of catalytic activity.

Tissue Location

Expressed in germinal vesicle (GV) stage and MII- stage oocytes and in early embryos (PubMed:24357321). Also detected somatic tissues, including brain, liver and kidney, but at very low levels (PubMed:24357321). [Isoform 2]: Preferentially expressed in differentiated cells, including in cerebral cortex, cerebellum and thymus (PubMed:27916660). Also expressed in heart, kidney, liver, muscle and spleen at much higher levels than isoform 1 (PubMed:28531272, PubMed:28855337, PubMed:33262245). In the brain, expressed at higher levels in neurons than in glial cells (PubMed:33262245). Expressed in the olfactory bulb and in the mammary gland (PubMed:28531272, PubMed:28855337).

Images

Anti-Tet1 Antibody (C-term)at 1:2000 dilution + F9 whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 219 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.