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Anti-TET3 (RABBIT) Antibody
TET3 Antibody
Catalog # ASR3761

Specification

Anti-TET3 (RABBIT) Antibody - Product Information

Host	**Rabbit**
Conjugate	**Unconjugated**
Target Species	**Human**
Reactivity	**Human**
Clonality	**Polyclonal**
Application	**WB, E, I, LCI**
Application Note	**Tet3 antibody has been tested by Western Blot. Specific conditions for reactivity should be optimized by the end user. Expect band at ~180kDa. This antibody is suitable for use by ELISA.**
Physical State	**Liquid (sterile filtered)**
Buffer	**0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2**
Immunogen	**TET3 antibody was prepared from whole rabbit serum produced by repeated immunizations with a human TET-3 domain containing the N-terminal 160 amino acids of the protein.**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-TET3 (RABBIT) Antibody - Additional Information

Gene ID 200424

Other Names
200424

Purity
Anti-TET3 Antibody was prepared from whole rabbit antiserum by delipidation and defibrination. The antiserum was further cross-absorbed against MBP by chromatography. It is directed against, and shows specific reactivity for Tet3 protein. Cross reactivity with Tet1 and Tet2 has not been determined.

Storage Condition
Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note
This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-TET3 (RABBIT) Antibody - Protein Information

Name TET3 (HGNC:28313)

Synonyms KIAA0401

Function
Dioxygenase that catalyzes the conversion of the modified genomic base 5-methylcytosine (5mC) into 5-hydroxymethylcytosine (5hmC) and plays a key role in epigenetic chromatin reprogramming in the zygote following fertilization (PubMed:31928709). 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 (By similarity). Selectively binds to the promoter region of target genes and contributes to regulate the expression of numerous developmental genes (PubMed:23217707). In zygotes, DNA demethylation occurs selectively in the paternal pronucleus before the first cell division, while the adjacent maternal pronucleus and certain paternally-imprinted loci are protected from this process. Participates in DNA demethylation in the paternal pronucleus by mediating conversion of 5mC into 5hmC, 5fC and 5caC. Does not mediate DNA demethylation of maternal pronucleus because of the presence of DPPA3/PGC7 on maternal chromatin that prevents TET3-binding to chromatin (By similarity). 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 (PubMed:23353889). Binds preferentially to DNA containing cytidine-phosphate-guanosine (CpG) dinucleotides over CpH (H=A, T, and C), hemimethylated-CpG and hemimethylated-hydroxymethyl- CpG (PubMed:29276034).

Cellular Location
Nucleus {ECO:0000250|UniProtKB:Q8BG87}. Cytoplasm {ECO:0000250|UniProtKB:Q8BG87}. Chromosome {ECO:0000250|UniProtKB:Q8BG87}. Note=At the zygotic stage, localizes in the male pronucleus, while it localizes to the cytoplasm at other preimplantation stages. Binds to the promoter of target genes, close to the transcription start site. {ECO:0000250|UniProtKB:Q8BG87}

Tissue Location
Expressed in colon, muscle, adrenal gland and peripheral blood lymphocytes.

Anti-TET3 (RABBIT) Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-TET3 (RABBIT) Antibody - Images

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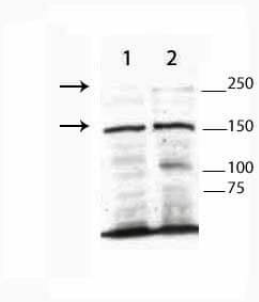

Western Blot of Rabbit Anti-TET3 Antibody. Lane 1: CEM nuclear extract. Lane 2: THP-1 nuclear extract. Load: 25 µg per lane. Primary antibody: TET3 antibody at 1:1000 for overnight at 4°C. Secondary antibody: HRP rabbit secondary antibody at 1:5000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: Isoforms of TET3 include 180kDa, 167kDa and 78kDa. Other band(s): nonspecific.

Anti-TET3 (RABBIT) Antibody - Background

Anti-Tet3 is expressed in colon, muscle, adrenal gland and peripheral blood lymphocytes. Anti-Tet3 is involved in the epigenetic chromatin reprogramming of a zygote after its fertilization, and the demethylation occurs before the first cell division in the paternal pronucleus. Tet 3 antibody cannot bind to the maternal pronucleus chromatin due to DPPA3/PGC7 chromatin presence. Tet 3 functions as the dioxygenase which synthesizes a hydroxyl group to 5-methylcystosine (5mC) to form 5-hydroxymethylcystosine. Tet3 mediates the formation of 5-formylcystosine from 5hmC and subsequently 5fC to 5-carboxylcystosine, and consequently Tet3 plays an active role in catalyzing those conversions which have been suggested as the first step for cytosine DNA de-methylation. Tet 3 also recruits O-GlcNAc transferase OGT to aid H2B GlcNAcylation by OGT. Anti-TET3 antibodies are ideal for researchers interested in Epigenetics, Cancer, Chromatin Research and Histone research.