

**TET3 polyclonal antibody**

Catalog: BS80256

Host: Rabbit

Reactivity: Human, Mouse, Rat

**BackGround:**

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. 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. Selectively binds to the promoter region of target genes and contributes to regulate the expression of numerous developmental genes. 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. 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. 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).

**Product:**

1mg/ml in PBS with 0.02% sodium azide, 50% glycerol,

pH7.2

**Molecular Weight:**

230KDa

**Swiss-Prot:**

Q8BG87

**Purification&Purity:**

The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen and the purity is > 95% (by SDS-PAGE).

**Applications:**

WB, 1:500 - 1:2000

**Storage&Stability:**

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

**Modification:**

Unmodification

**DATA:**

Western blot analysis of extracts of Neuro-2a cells, using TET3 antibody at 1:500 dilution. Secondary antibody: HRP Goat Anti-Rabbit IgG at 1:10000 dilution. Lysates/proteins: 25ug per lane. Blocking buffer: 3% nonfat dry milk in TBST. Detection: ECL Basic Kit. Exposure time: 90s.

**Note:**

For research use only, not for use in diagnostic procedure.

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