

AbFlex® TET1 antibody (rAb)

Catalog Nos: 91171, 91172**RRID:** AB_2793792**Isotype:** IgG2a**Application(s):** ChIP-Seq**Reactivity:** Human, Mouse**Quantities:** 100 µg, 10 µg**Purification:** Protein A Chromatography**Host:** Mouse**Concentration:** 1 µg/µl**Molecular Weight:** 215 kDa

Background: AbFlex® antibodies are recombinant antibodies (rAbs) that have been generated using defined DNA sequences to produce highly specific, reproducible antibodies. Each AbFlex antibody contains a 6xHis Tag, a Biotinylation Tag for enzymatic biotin conjugation using the biotin ligase, BirA, and a sortase recognition motif (LPXTG) to attach a variety of labels directly to the antibody including fluorophores, enzymatic substrates (HRP, AP), peptides, drugs as well as solid supports.

AbFlex® TET1 antibody was expressed as full-length IgG with mouse immunoglobulin heavy and light chains (IgG2a isotype) in mammalian 293 cells. TET1 (Ten-Eleven Translocation-1; methylcytosine dioxygenase) is a protein that catalyzes the conversion of the modified genomic base 5-methylcytosine (5mC) into 5-hydroxymethylcytosine (5hmC) which can lead to cytosine demethylation by either further oxidation via TET proteins to 5-formylcytosine (5fC) and 5-carboxycytosine (5caC) or deamination into 5-hydroxymethyluracil (5hmU) and then subsequent replacement by unmethylated cytosine by the base excision repair system. Methylation at the C5 position of cytosine bases is an epigenetic modification of the mammalian genome which plays an important role in transcriptional regulation. TET1 preferentially binds to CpG-rich sequences at promoters of both transcriptionally active and polycomb-repressed genes. By controlling the levels of 5mC and 5hmC at gene promoters, it may regulate the gene expression silencing induced by cytosine methylation. May have a dual function by also repressing the expression of a subset of genes through recruitment of transcriptional repressors to promoters.

Immunogen: This antibody was raised against a recombinant protein comprising amino acids 1682-1914 of mouse TET1 (Ten-Eleven Translocation-1; methylcytosine dioxygenase).

Buffer: Purified IgG in 140 mM Hepes, pH 7.5, 70 mM NaCl, 32 mM NaOAc, 0.035% sodium azide, 30% glycerol. Sodium azide is highly toxic.

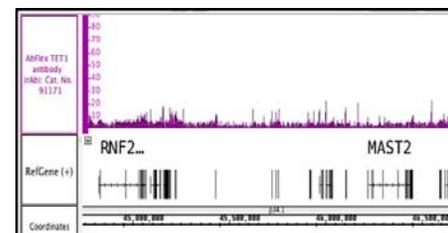
Application Notes:

Applications Validated by Active Motif:

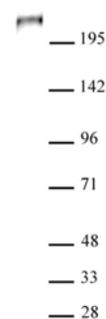
ChIP-Seq: 4 µl per ChIP

AbFlex® recombinant antibodies are genetically derived from DNA sequences of parental hybridoma clones. For details on the parental clone, see Catalog No. 61741.

Storage and Guarantee: Some products may be shipped at room temperature. This will not affect their stability or performance. Avoid repeated freeze/thaw cycles by aliquoting items into single-use fractions for storage at -20°C for up to 2 years. Keep



AbFlex® TET1 antibody tested by ChIP-Seq. ChIP was performed using AbFlex TET1 recombinant antibody with 30 µg chromatin from human brain tumor cells and 4 µl of antibody. ChIP DNA was sequenced on the Illumina HiSeq and 13 million sequence tags were mapped to identify TET1 binding sites. The image shows binding across a region of chromosome 1.



Western blot of AbFlex® TET1 antibody. 20 µg nuclear lysate from F9 (mouse testis embryonal carcinoma) cells was probed by Western Blot using 2 µg/mL of antibody.