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

Anti-TET3 Antibody (aa241-568, clone 11E11)

Mouse Anti Human Monoclonal Antibody
Catalog # ALS17342

Product Information

Application	WB, IHC-P
Primary Accession	O43151
Predicted	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Clone Names	11E11
Calculated MW	193705
Concentration (mg/ml)	1 mg/ml

Additional Information

Gene ID	200424
Alias Symbol	TET3
Other Names	TET3, HCG_40738, KIAA0401
Target/Specificity	Human TET3
Reconstitution & Storage	PBS, pH 7.3, 1% BSA, 50% glycerol, 0.02% sodium azide Store at -20°C. Minimize freezing and thawing.
Precautions	Anti-TET3 Antibody (aa241-568, clone 11E11) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TET3 (HGNC:28313)
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.