



ALKBH1 Rabbit pAb

Catalog No	YP-Ab-19271
Isotype	IgG
Reactivity	Human,Mouse
Applications	WB
Gene Name	ALKBH1 ABH ABH1 ALKBH
Immunogen	Synthesized peptide derived from human ALKBH1
Specificity	This antibody detects endogenous levels of ALKBH1 at Human, Mouse
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source	Polyclonal, Rabbit,IgG
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Dilution	WB 1:500-2000
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	ABH;ABH1;alkB;hABH;ALKBH;ALKBH1;ALKBH1 ABH ABH1 ALKBH;Alkylated DNA repair protein alkB homolog 1 (Alpha-ketoglutarate-dependent dioxygenase ABH1) (DNA lyase ABH1) (DNA oxidative demethylase ALKBH1)
Observed Band	44kDa
Calculated Molecular Weight	44kDa
Cell Pathway	Nucleus . Mitochondrion . Mainly localizes in euchromatin, largely excluded from heterochromatin and nucleoli (By similarity). .
Tissue Specificity	Ubiquitous.
Function	Dioxygenase that acts as on nucleic acids, such as DNA and tRNA . Requires molecular oxygen, alpha-ketoglutarate and iron . A number of activities have been described for this dioxygenase, but recent results suggest that it mainly acts as on tRNAs and mediates their demethylation or oxidation depending on the context and subcellular compartment . Mainly acts as a tRNA demethylase by removing N(1)-methyladenine from various tRNAs, with a preference for N(1)-methyladenine at position 58 (m1A58) present on a stem loop structure of tRNAs . Acts as a regulator of translation initiation and elongation in response to glucose deprivation: regulates both translation initiation, by mediating demethylation of tRNA(Met), and translation elongation, N(1)-methyladenine-



containing tRNAs being preferentially recruited to polysomes to promote translation elongation . In mitochondrion, specifically interacts with mt-tRNA(Met) and mediates oxidation of mt-tRNA(Met) methylated at cytosine(34) to form 5-formylcytosine (f(5)c) at this position . mt-tRNA(Met) containing the f(5)c modification at the wobble position enables recognition of the AUA codon in addition to the AUG codon, expanding codon recognition in mitochondrial translation . Specifically demethylates DNA methylated on the 6th position of adenine (N(6)-methyladenosine) DNA . N(6)-methyladenosine (m6A) DNA is present at some L1 elements in embryonic stem cells and probably promotes their silencing (By similarity). Demethylates mRNAs containing N(3)-methylcytidine modification . Also able to repair alkylated single-stranded DNA by oxidative demethylation, but with low activity . Also has DNA lyase activity and introduces double-stranded breaks at abasic sites: cleaves both single-stranded DNA and double-stranded DNA at abasic sites, with the greatest activity towards double-stranded DNA with two abasic sites . DNA lyase activity does not require alpha-ketoglutarate and iron and leads to the formation of an irreversible covalent protein-DNA adduct with the 5' DNA product . DNA lyase activity is not required during base excision repair and class switch recombination of the immunoglobulin heavy chain during B lymphocyte activation. May play a role in placental trophoblast lineage differentiation (By similarity).

Background

matters needing attention

Avoid repeated freezing and thawing!

Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

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