Product Datasheet

ALKBH1 Rabbit mAb

Catalog No: #52133

Package Size: #52133-1 50ul #52133-2 100ul

Orders: order@signalwayantibody.com
Support: tech@signalwayantibody.com

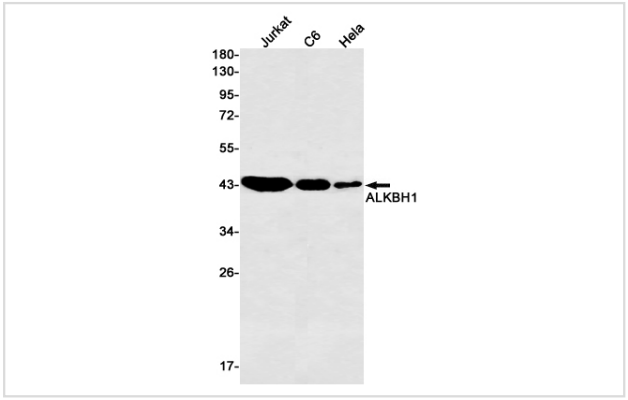
Description

Product Name	ALKBH1 Rabbit mAb
Host Species	Recombinant Rabbit
Clonality	Monoclonal antibody
Clone No.	S04-4C5
Isotype	Rabbit IgG
Purification	Affinity Purified
Applications	WB
Species Reactivity	Human,Mouse,Rat
Immunogen Description	Recombinant protein of human ALKBH1
Conjugates	Unconjugated
Modification	Unmodification
Other Names	ABH; ABH1; alkB; hABH; ALKBH
Accession No.	Swiss-Prot:Q13686GeneID:8846
Uniprot	Q13686
GeneID	8846
Calculated MW	Calculated MW: 44 kDa; Observed MW: 44 kDa
Concentration	0.3 mg/ml
Formulation	50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40% Glycerol, 0.01% Sodium azide and 0.05% BSA
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Application Details

WB: 1/1000;

Images



Western blot detection of ALKBH1 in Jurkat,C6,Hela cell lysates using ALKBH1 Rabbit mAb(1:500 diluted).Predicted band size:44kDa.Observed band size:44kDa.

Background

Swiss-Prot Acc.Q13686.Dioxygenase that acts as on nucleic acids, such as DNA and tRNA (PubMed:18603530, PubMed:27745969, PubMed:27497299). Requires molecular oxygen, alpha-ketoglutarate and iron (PubMed:18603530, PubMed:27497299). 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 (PubMed:27745969, PubMed:27497299). Mainly acts as a tRNA demethylase by removing N1-methyladenine from various tRNAs, with a preference for N1-methyladenine at position 58 (m1A58) present on a stem loop structure of tRNAs (PubMed:27745969). 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, N1-methyladenine-containing tRNAs being preferentially recruited to polysomes to promote translation elongation (PubMed:27745969). In mitochondrion, specifically interacts with mt-tRNA(Met) and mediates oxidation of mt-tRNA(Met) methylated at cytosine(34) to form 5-formylcytosine (f5c) at this position (PubMed:27497299). mt-tRNA(Met) containing the f5c modification at the wobble position enables recognition of the AUA codon in addition to the AUG codon, expanding codon recognition in mitochondrial translation (PubMed:27497299). Specifically demethylates DNA methylated on the 6th position of adenine (N6-methyladenosine) DNA (PubMed:30017583). N6-methyladenosine (m6A) DNA is present at some L1 elements in embryonic stem cells and probably promotes their silencing . Also able to repair alkylated single-stranded DNA and RNA containing 3-methylcytosine by oxidative demethylation, but with low activity (PubMed:18603530). 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 greaT activity towards double-stranded DNA with two abasic sites (PubMed:19959401). DNA lyase activity does not require alpha-ketboglutarate and iron and leads to the formation of an irreversible covalent protein-DNA adduct with the 5' DNA product (PubMed:19959401, PubMed:23577621). 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 .

Note: This product is for in vitro research use only