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ALKBH5 Antibody (Center) Blocking Peptide

Synthetic peptide
Catalog # BP18410c

Specification

ALKBH5 Antibody (Center) Blocking Peptide - Product Information

Primary Accession Q6P6C2

ALKBH5 Antibody (Center) Blocking Peptide - Additional Information

Gene ID 54890

Other Names
RNA demethylase ALKBH5, 11411-, Alkylated DNA repair protein alkB homolog 5, Alpha-ketoglutarate-dependent dioxygenase alkB homolog 5, ALKBH5, ABH5, OFOXD1

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

ALKBH5 Antibody (Center) Blocking Peptide - Protein Information

Name ALKBH5 {ECO:0000303|PubMed:23177736, ECO:0000312|HGNC:HGNC:25996}

Function
Dioxygenase that specifically demethylates N(6)- methyladenosine (m6A) RNA, the most prevalent internal modification of messenger RNA (mRNA) in higher eukaryotes (PubMed:23177736, PubMed:24489119, PubMed:24616105, PubMed:24778178, PubMed:34048572, PubMed:36944332, PubMed:37257451, PubMed:37369679). Demethylates RNA by oxidative demethylation, which requires molecular oxygen, alpha-ketoglutarate and iron (PubMed:21264265, PubMed:23177736, PubMed:24489119, PubMed:24616105, PubMed:24778178). Demethylation of m6A mRNA affects mRNA processing,

translation and export (PubMed:23177736, PubMed:34048572, PubMed:36944332, PubMed:37257451). Can also demethylate N(6)-methyladenosine in single-stranded DNA (in vitro) (PubMed:24616105). Required for the late meiotic and haploid phases of spermatogenesis by mediating m6A demethylation in spermatocytes and round spermatids: m6A demethylation of target transcripts is required for correct splicing and the production of longer 3'-UTR mRNAs in male germ cells (By similarity). Involved in paraspeckle assembly, a nuclear membraneless organelle, by undergoing liquid-liquid phase separation (PubMed:37369679, PubMed:37474102). Paraspeckle assembly is coupled with m6A demethylation of RNAs, such as NEAT1 non-coding RNA (PubMed:37474102). Also acts as a negative regulator of T-cell development: inhibits gamma-delta T-cell proliferation via demethylation of JAG1 and NOTCH2 transcripts (By similarity). Inhibits regulatory T-cell (Treg) recruitment by mediating demethylation and destabilization of CCL28 mRNAs (By similarity).

Cellular Location
Nucleus speckle Note=Promotes formation and localizes to paraspeckles, a nuclear membraneless organelle.

Tissue Location
Widely expressed, with highest expression in lung, followed by testis, pancreas, spleen and ovary

ALKBH5 Antibody (Center) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

ALKBH5 Antibody (Center) Blocking Peptide - Images

ALKBH5 Antibody (Center) Blocking Peptide - Background

Probable dioxygenase that requires molecular oxygen, alpha-ketoglutarate and iron (By similarity).

ALKBH5 Antibody (Center) Blocking Peptide - References

Olsen, J.V., et al. Cell 127(3):635-648(2006)Bi, W., et al. Genome Res. 12(5):713-728(2002)