

**ALKBH7 Antibody**

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**For Research Use Only. Not for Use in Diagnostic Procedures.**

<b>Applications:</b> W	<b>Reactivity:</b> H	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 25	<b>Source/Isotype:</b> Rabbit	<b>UniProt ID:</b> #Q9BT30	<b>Entrez-Gene Id:</b> 84266
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**Product Usage Information****Application**

Western Blotting

**Dilution**

1:1000

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

**Specificity/Sensitivity**

ALKBH7 Antibody recognizes endogenous levels of total ALKBH7 protein.

**Source / Purification**

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val34 of human ALKBH7 protein. Antibodies are purified by protein A and peptide affinity chromatography.

**Background**

The AlkB alkylation repair homolog 7 (ALKBH7, ABH7) is a member of the alkylated DNA repair homolog family that is responsible for repair of DNA damage induced by oxidation and alkylation (1). ALKBH7 is a nuclear encoded protein that contains an amino-terminal mitochondrial targeting sequence that directs import of ALKBH7 to the mitochondria (2). Unlike other Alkb family members, the ALKBH7 protein lacks a functional nucleotide recognition lid essential for nucleobase-binding, which abrogates any DNA or RNA repair capability (3). In response to DNA damage, mitochondrial ALKBH7 triggers the collapse of the mitochondrial membrane potential. The resultant loss of mitochondrial function leads to depletion of cellular energy and programmed cell death (2). Research studies indicate that ALKBH7 knockdown cells are resistant to apoptotic cell death induced by oxidizing and alkylating agents, which suggests that ALKBH7 may play a novel function in promoting cell death (2). Indeed, ALKBH7 has been identified as a key regulator of the alkylation or oxidizing DNA damaged induced necroptosis pathway (2).

**Background References**

- Mishina, Y. and He, C. (2006) *J Inorg Biochem* 100, 670-8.
- Fu, D. et al. (2013) *Genes Dev* 27, 1089-100.
- Wang, G. et al. (2014) *J Biol Chem* 289, 27924-36.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**W:** Western Blotting

**Cross-Reactivity Key**

**H:** Human

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