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Anti-KAT9/ELP3 Antibody Picoband™ (monoclonal, 8B4)

Catalog # ABO15047

Product Information

Application	WB
Primary Accession	Q9H9T3
Host	Mouse
Isotype	Mouse IgG2a
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Lyophilized
Description	Anti-KAT9/ELP3 Antibody Picoband™ (monoclonal, 8B4) . Tested in WB applications. This antibody reacts with Human, Mouse, Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	55140
Other Names	Elongator complex protein 3, hELP3, 2.3.1.311, ELP3 {ECO:0000303|PubMed:15902492, ECO:0000312|HGNC:HGNC:20696}
Calculated MW	62259
Application Details	Western blot, 0.1-0.25 □g/ml, Human, Mouse, Rat
Source	Eukaryota
Contents	Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na2HPO4.
Clone Names	Clone: 8B4
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human KAT9/ELP3, identical to the related mouse sequence.
Purification	Immunogen affinity purified.
Storage	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.

Protein Information

Name	ELP3 {ECO:0000303|PubMed:15902492, ECO:0000312|HGNC:HGNC:20696}
Function	Catalytic tRNA acetyltransferase subunit of the elongator complex which is

	required for multiple tRNA modifications, including mcm5U (5-methoxycarbonylmethyl uridine), mcm5s2U (5-methoxycarbonylmethyl-2-thiouridine), and ncm5U (5-carbamoylmethyl uridine) (PubMed:29415125). In the elongator complex, acts as a tRNA uridine(34) acetyltransferase by mediating formation of carboxymethyluridine in the wobble base at position 34 in tRNAs (By similarity). May also act as a protein lysine acetyltransferase by mediating acetylation of target proteins; such activity is however unclear in vivo and recent evidence suggests that ELP3 primarily acts as a tRNA acetyltransferase (PubMed:29415125). Not a major acetyltransferase of tubulin (PubMed:22153374). Involved in neurogenesis: regulates the migration and branching of projection neurons in the developing cerebral cortex, through a process depending on alpha-tubulin acetylation (PubMed:19185337). Required for acetylation of GJA1 in the developing cerebral cortex (By similarity).
Cellular Location	Cytoplasm. Nucleus [Isoform 2]: Cytoplasm. Nucleus
Tissue Location	Expressed in the cerebellum and spinal motor neurons.

Background

Elongator complex protein 3, also named KAT9, is aproteinthat in humans is encoded by theELP3gene. It is mapped to 8p21.1. ELP3 is the catalytichistone acetyltransferasesubunit of theRNA polymeraseII elongator complex, which is a component of the RNA polymerase II (Pol II)holoenzymeand is involved in transcriptional elongation. ELP3 supports the migration and branching ofprojection neuronsthroughacetylationof alpha-tubulin in the developingcerebral cortex. In mammals, ELP3 is important for paternalDNA demethylationafterfertilization.ELP3 is potentially involved in cellular redoxhomeostasisby mediating the acetylation ofglucose-6-phosphate dehydrogenase. Besides, ELP3 may play a role inchromatin remodelingand is involved in acetylation ofhistones H3and probablyH4.

Images

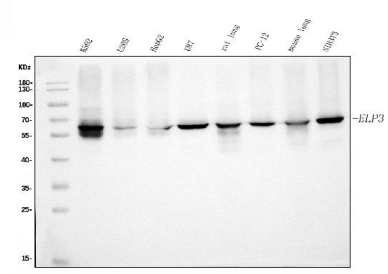


Figure 1. Western blot analysis of KAT9/ELP3 using anti-KAT9/ELP3 antibody (M02833-1).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours.
The sample well of each lane was loaded with 30ug of sample under reducing conditions.
Lane 1: human K562 whole cell lysates,
Lane 2: human U20S whole cell lysates,
Lane 3: human HepG2 whole cell lysates,
Lane 4: human U87 whole cell lysates,
Lane 5: rat lung tissue lysates,
Lane 6: rat PC-12 whole cell lysates,
Lane 7: mouse lung tissue lysates,
Lane 8: mouse NIH/3T3 whole cell lysates.
After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes.
Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-KAT9/ELP3 antigen affinity purified monoclonal antibody (Catalog # M02833-1) at 0.25 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001)

with Tanon 5200 system. A specific band was detected for KAT9/ELP3 at approximately 62KD. The expected band size for KAT9/ELP3 is at 62KD.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.