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Mimitin Antibody

Catalog # ASC10998

Product Information

Application	WB, IF, E
Primary Accession	Q8N183
Other Accession	NP_777549, 29789409
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	19856
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	Mimitin antibody can be used for detection of Mimitin by Western blot at 1 - 2 g/mL. Antibody can also be used for immunoflourescence starting at 20 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	91942
Other Names	Mimitin, mitochondrial, B17.2-like, B17.2L, Myc-induced mitochondrial protein, MMTN, NADH dehydrogenase [ubiquinone] 1 alpha subcomplex assembly factor 2, NDUFA12-like protein, NDUFAF2, NDUFA12L
Target/Specificity	NDUFAF2;
Reconstitution & Storage	Mimitin antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	Mimitin Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NDUFAF2
Synonyms	NDUFA12L
Function	Acts as a molecular chaperone for mitochondrial complex I assembly (PubMed:16200211, PubMed:19384974). Complex I functions in the transfer of electrons from NADH to the respiratory chain. The immediate electron acceptor for the enzyme is believed to be ubiquinone (PubMed:16200211, PubMed:27626371). Is involved in the initial steps of cilia formation, including removal of CP110 from the mother centrioles, docking of membrane vesicles

	to the mother centrioles, and establishment of the transition zone (PubMed:38949024).
Cellular Location	Mitochondrion.
Tissue Location	Highly expressed in ESCC cells. Also expressed in heart, skeletal muscle, liver, and in fibroblasts

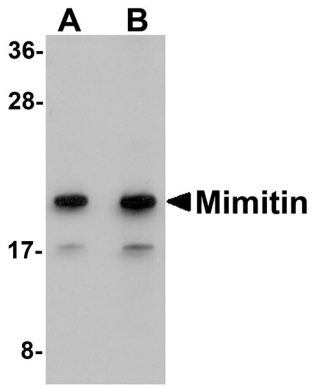
Background

Mimitin Antibody: Mimitin, a small mitochondrial protein, whose transcription is directly stimulated by c-Myc, is highly expressed in 80% of esophageal squamous cell carcinomas (ESCC). Suppression of Mimitin expression by RNA interference had no effect in cancerous cell lines such as human cervical carcinoma or hepatocarcinoma cell lines, but caused a decrease in cell proliferation in human glioblastoma, embryonic lung fibroblastic cells, and ESCC, suggesting Mimitin may play a special role in these types of cells. Mimitin expression is also regulated by MAPK kinases and IL-1, but not through the NF-κB-related pathway. It will interact with the microtubular protein MAP1S and can affect the activities of caspase-3 and -7 in cells stimulated to develop apoptosis. Other experiments suggest that Mimitin also acts as a molecular chaperone for the assembly of the mitochondrial complex I.

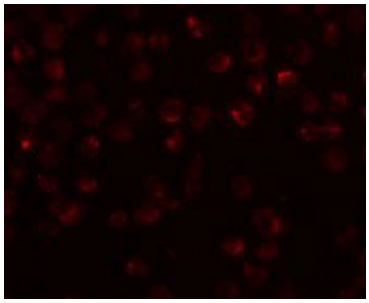
References

Tsuneoka M, Teye K, Arima M, et al. A novel Myc-target gene, mimitin, that is involved in cell proliferation of esophageal squamous cell carcinoma. J. Biol. Chem.2005; 280:19977-85.
Wegrzyn P, Yarwood SJ, Fiegler N, et al. Mimitin - a novel cytokine-regulated mitochondrial protein. BMC Cell Biol.2009; 10:23.
Ogilvie I, Kennaway NG, and Shoubridge EA. A molecular chaperone for mitochondrial complex I assembly is mutated in a progressive encephalopathy. J. Clin. Invest.2005; 115:2784-92.

Images



Western blot analysis of Mimitin in Raji cell lysate with Mimitin antibody at (A) 1 and (B) 2 µg/mL.



Immunofluorescence of Mimitin in Raji cells with Mimitin antibody at 20 µg/mL.