10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

ATAD3A Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5324

Product Information

Application	WB
Primary Accession	Q9NVI7
Other Accession	Q5T9A4
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	66218
Isotype	Rabbit IgG
Antigen Source	HUMAN

Additional Information

Gene ID	55210
Antigen Region	24-48
Other Names	ATAD3A;ATPase family AAA domain-containing protein 3A
Dilution	WB~~1:1000
Target/Specificity	This ATAD3A antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 24-48 amino acids from the N-terminal region of human ATAD3A.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ATAD3A Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ATAD3A {ECO:0000303|PubMed:37832546, ECO:0000312|HGNC:HGNC:25567}
Function	Essential for mitochondrial network organization, mitochondrial metabolism and cell growth at organism and cellular level (PubMed:17210950,

PubMed:20154147, PubMed:22453275, PubMed:31522117, PubMed:37832546, PubMed:39116259). May play an important role in mitochondrial protein synthesis (PubMed:22453275). May also participate in mitochondrial DNA replication (PubMed:17210950). May bind to mitochondrial DNA D-loops and contribute to nucleoid stability (PubMed:17210950). Required for enhanced channeling of cholesterol for hormone-dependent steroidogenesis (PubMed:22453275). Involved in mitochondrial-mediated antiviral innate immunity (PubMed:31522117). Required to protect mitochondria from the PERK-mediated unfolded protein response: specifically inhibits the activity of EIF2AK3/PERK at mitochondria-endoplasmic reticulum contact sites, thereby providing a safe haven for mitochondrial protein translation during endoplasmic reticulum stress (PubMed:39116259). Ability to inhibit EIF2AK3/PERK is independent of its ATPase activity (PubMed:39116259). Also involved in the mitochondrial DNA damage response by promoting signaling between damaged genomes and the mitochondrial membrane, leading to activation of the integrated stress response (ISR) (PubMed:37832546).

Cellular Location

Mitochondrion inner membrane; Single-pass membrane protein. Mitochondrion matrix, mitochondrion nucleoid Note=In the mitochondrial inner membrane, enriched in sites with the potential to form contacts with the outer membrane (PubMed:20154147, PubMed:20349121). The N-terminal domain interacts with the inner surface of the mitochondrial outer membrane and the C-terminal domain localizes in a specific matrix compartment, where it is associated with nucleoids (PubMed:18063578). Also present at mitochondria-endoplasmic reticulum contact sites; where it interacts with EIF2AK3/PERK (PubMed:39116259).

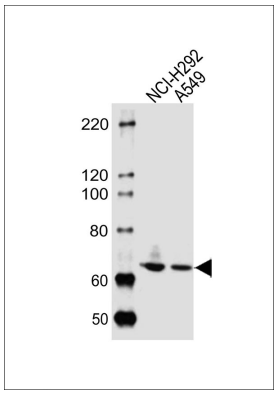
Tissue Location

Overexpressed in lung adenocarcinomas (at protein level).

References

Ota T., et al. Nat. Genet. 36:40-45(2004).
Gregory S.G., et al. Nature 441:315-321(2006).
Bienvenut W.V., et al. Submitted (JUL-2007) to UniProtKB.
Daub H., et al. Mol. Cell 31:438-448(2008).
Choudhary C., et al. Science 325:834-840(2009).

Images



Western blot analysis of lysates from NCI-H292,A549 cell line (from left to right), using ATAD3A Antibody (N-term)(Cat. #AW5324). AW5324 was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody.Lysates at 20ug per lane.