

Aladin (B-11): sc-374073

BACKGROUND

Aladin (Adracalin) belongs to a family of WD repeat-containing proteins. These proteins have a wide variety of functions, including signal transduction regulation, RNA processing and transcription. Aladin plays a role in peripheral and central nervous system development. It is widely expressed, with the highest expression seen in pituitary gland, corpus callosum, cerebellum, adrenal gland and gastrointestinal structures. Defects in Aladin cause the autosomal recessive disorder achalasia-addisonianism-alacrima (triple A) syndrome. Triple A syndrome is characterized by achalasia, alacrima and adrenocortico-tropin-resistant adrenal insufficiency. Robust expression in neural systems associated with cognitive, motor and sensory functions is consistent with the myriad of symptoms experienced by patients with triple A syndrome.

REFERENCES

1. Tullio-Pelet, A., et al. 2000. Mutant WD-repeat protein in triple A syndrome. *Nat. Genet.* 26: 332-335.
2. Katsumata, N., et al. 2002. Analysis of the AAAS gene in a Japanese patient with triple A syndrome. *Endocr. J.* 49: 49-53.
3. Houlden, H., et al. 2002. Clinical and genetic characterization of families with triple A (Allgrove) syndrome. *Brain* 125: 2681-2690.
4. Cronshaw, J.M., et al. 2003. The nuclear pore complex protein Aladin is mis-localized in triple A syndrome. *Proc. Natl. Acad. Sci. USA* 100: 5823-5827.

CHROMOSOMAL LOCATION

Genetic locus: AAAS (human) mapping to 12q13.13; Aaas (mouse) mapping to 15 F3.

SOURCE

Aladin (B-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 501-531 near the C-terminus of Aladin of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Aladin (B-11) is available conjugated to agarose (sc-374073 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374073 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374073 PE), fluorescein (sc-374073 FITC), Alexa Fluor® 488 (sc-374073 AF488), Alexa Fluor® 546 (sc-374073 AF546), Alexa Fluor® 594 (sc-374073 AF594) or Alexa Fluor® 647 (sc-374073 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374073 AF680) or Alexa Fluor® 790 (sc-374073 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374073 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

Aladin (B-11) is recommended for detection of Aladin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

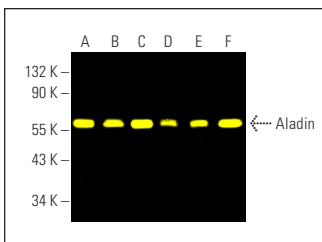
Aladin (B-11) is also recommended for detection of Aladin in additional species, including bovine.

Suitable for use as control antibody for Aladin siRNA (h): sc-45244, Aladin siRNA (m): sc-45245, Aladin shRNA Plasmid (h): sc-45244-SH, Aladin shRNA Plasmid (m): sc-45245-SH, Aladin shRNA (h) Lentiviral Particles: sc-45244-V and Aladin shRNA (m) Lentiviral Particles: sc-45245-V.

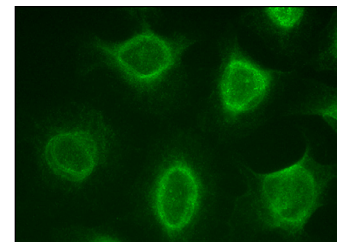
Molecular Weight of Aladin: 60 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, A549 cell lysate: sc-2413 or PC-3 cell lysate: sc-2220.

DATA



Aladin (B-11) Alexa Fluor® 488: sc-374073 AF488. Direct fluorescent western blot analysis of Aladin expression in HeLa (A), PC-3 (B), IMR-32 (C), A549 (D), SW480 (E) and SW-13 (F) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.



Aladin (B-11): sc-374073. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear envelope localization.

SELECT PRODUCT CITATIONS

1. Jühlen, R., et al. 2015. Role of Aladin in human adrenocortical cells for oxidative stress response and steroidogenesis. *PLoS ONE* 10: e0124582.
2. Carvalho, S., et al. 2015. The nucleoporin Aladin regulates Aurora A localization to ensure robust mitotic spindle formation. *Mol. Biol. Cell* 26: 3424-3438.
3. Jühlen, R., et al. 2016. Identification of a novel putative interaction partner of the nucleoporin Aladin. *Biol. Open* 5: 1697-1705.
4. Juhlen, R., et al. 2018. Triple A patient cells suffering from mitotic defects fail to localize PGRMC1 to mitotic kinetochore fibers. *Cell Div.* 13: 8.
5. Heathcote, K.C., et al. 2024. N-terminal cysteine acetylation and oxidation patterns may define protein stability. *Nat. Commun.* 15: 5360.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.