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

Acinus Rabbit pAb

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Catalog # AP54182

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	Q9UKV3
Predicted	Human, Mouse, Rat, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	151862
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Acinus
Epitope Specificity	501-600/1341
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Nucleus. Nucleus speckle. Nucleus, nucleoplasm. Note=Phosphorylation on Ser-1180 by SRPK2 redistributes it from the nuclear speckles to the nucleoplasm.
SIMILARITY	Contains 1 SAP domain.
SUBUNIT	Found in a mRNA splicing-dependent exon junction complex (EJC), at least composed of ACIN1, CASC3, EIF4A3, MAGOH, PNN, RBM8A, RNPS1, SAP18 and ALYREF/THOC4. Forms heterodimers with RNPS1. Found in a heterotrimeric complex with ACIN1, RNPS1 and SAP18. Interacts with API5. Interacts with SRPK2 in a phosphorylation-dependent manner.
Post-translational modifications	Phosphorylation on Ser-1180 by SRPK2 up-regulates its stimulatory effect on cyclin A1. Undergoes proteolytic cleavage; the processed form is active, contrary to the uncleaved form.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Chromatin condensation and nuclear fragmentation (CCNF) are the hallmarks of apoptosis. CCNF is triggered by the activation of members of the caspase family, caspase activated DNase (CAD/DFF40), and several novel proteins including AIF and CIDE. A new inducer of chromatin condensation was recently identified and designated Acinus (for apoptotic chromatin condensation inducer in the nucleus). Acinus is cleaved by Caspase 3 and an additional unknown protease generating a small active peptide p17, which causes chromatin condensation in vitro when it is added to purified nuclei. Acinus also induces apoptotic chromatin condensation in cells. Acinus is ubiquitously expressed. Three different spliced forms of Acinus have been identified in human and mouse and designated Acinus L (1341 amino acids), Acinus S (583 amino acids) and Acinus S' (614 amino acids)

Additional Information

Gene ID	22985
Other Names	Apoptotic chromatin condensation inducer in the nucleus, Acinus, ACIN1, ACINUS, KIAA0670
Target/Specificity	Ubiquitous. The Ser-1180 phosphorylated form (by SRPK2) is highly expressed and phosphorylated in patients with myeloid hematologic malignancies.
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	ACIN1
Synonyms	ACINUS, KIAA0670
Function	Auxiliary component of the splicing-dependent multiprotein exon junction complex (EJC) deposited at splice junction on mRNAs. The EJC is a dynamic structure consisting of core proteins and several peripheral nuclear and cytoplasmic associated factors that join the complex only transiently either during EJC assembly or during subsequent mRNA metabolism. Component of the ASAP complexes which bind RNA in a sequence-independent manner and are proposed to be recruited to the EJC prior to or during the splicing process and to regulate specific excision of introns in specific transcription subsets; ACIN1 confers RNA-binding to the complex. The ASAP complex can inhibit RNA processing during in vitro splicing reactions. The ASAP complex promotes apoptosis and is disassembled after induction of apoptosis. Involved in the splicing modulation of BCL2L1/Bcl-X (and probably other apoptotic genes); specifically inhibits formation of proapoptotic isoforms such as Bcl-X(S); the activity is different from the established EJC assembly and function. Induces apoptotic chromatin condensation after activation by CASP3. Regulates cyclin A1, but not cyclin A2, expression in leukemia cells.
Cellular Location	Nucleus. Nucleus speckle. Nucleus, nucleoplasm. Note=Phosphorylation on Ser-1180 by SRPK2 redistributes it from the nuclear speckles to the nucleoplasm
Tissue Location	Ubiquitous. The Ser-1180 phosphorylated form (by SRPK2) is highly expressed and phosphorylated in patients with myeloid hematologic malignancies

Background

Chromatin condensation and nuclear fragmentation (CCNF) are the hallmarks of apoptosis. CCNF is triggered by the activation of members of the caspase family, caspase activated DNase (CAD/DFF40), and several novel proteins including AIF and CIDE. A new inducer of chromatin condensation was recently identified and designated Acinus (for apoptotic chromatin condensation inducer in the nucleus). Acinus is cleaved by Caspase 3 and an additional unknown protease generating a small active peptide p17, which causes chromatin condensation in vitro when it is added to purified nuclei. Acinus also induces apoptotic chromatin condensation in cells. Acinus is ubiquitously expressed. Three different spliced forms of Acinus have been identified in human and mouse and designated Acinus L (1341 amino acids), Acinus S (583 amino acids) and Acinus S' (614 amino acids)