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www.rockland.com
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+1 484.791.3823

Datasheet for 200-501-974

Aha1 Antibody

Overview

Description:	Anti-Aha1 (RAT) Monoclonal Antibody - 200-501-974
Item No.:	200-501-974
Size:	100 µg
Applications:	ELISA, IHC, WB
Reactivity:	Human
Host Species:	Rat

Product Details

Background:	Activator of Hsp90 ATPase (AHA1) stimulates the inherent ATPase cycle of Hsp90, which is essential for its chaperone activity in vivo. The activation and/or stability of many of the key regulatory and signaling proteins of the eukaryotic cell depend on their interaction with the Hsp90 molecular chaperone. Hsp90 is assisted and regulated by co-chaperones that participate in an ordered series both to assist client-protein recruitment or release and to modulate progress through the ATPase coupled chaperone cycle. Structural analysis and mutagenesis show that binding of the N-terminal domain of AHA1 to Hsp90 promotes a conformational switch in the middle-segment catalytic loop (aa 370–390) of Hsp90 that exposes the catalytic Arg380 and enables its interaction with ATP in the N-terminal nucleotide-binding domain of the chaperone. Recent studies show that AHA1 modulates Hsp90-dependent stability of the folding of the cystic fibrosis transmembrane conductance regulator (CFTR) in the endoplasmic reticulum (ER). Down-regulation of AHA1 rescues misfolding of CFTR in cystic fibrosis.
Synonyms:	rat anti-Aha1 Antibody, Aha1, Ahsa1 antibody, Activator of Hsp90 ATPase, Activator of 90 kDa heat shock protein ATPase homolog 1 antibody
Host Species:	Rat
Clonality:	Monoclonal
Clone ID:	25F2.D9
Format:	IgG2a

Target Details

Gene Name:	Ahsa1

Reactivity:	Human
Immunogen Type:	Recombinant Protein
Immunogen:	This Protein G purified monoclonal antibody was produced in rats by repeated immunizations with full length recombinant mouse AHA1 protein followed by hybridoma development.
Purity/Specificity:	This product is an IgG fraction antibody purified from tissue culture supernatant by Protein-G chromatography, followed by extensive dialysis against the buffer stated above. It is directed against human Aha1 protein. A BLAST analysis was used to suggest cross-reactivity with Aha1 protein from mouse, human and chimpanzee based on 100% homology with the immunizing sequence. Reactivity against homologues from other sources is not known.
Relevant Links:	• NCBI - NP_666148.1 • UniProtKB - Q8BK64 • GeneID - 217737

Application Details

Tested Applications:	ELISA, IHC, WB
Application Note:	This Protein-G purified antibody has been tested for use in ELISA, immunohistochemistry and western blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 38-40 kDa in size corresponding to Aha1 protein by western blotting in the appropriate cell lysate or extract.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:20,000
IHC:	5-10 µg/mL
WB:	1:1,000

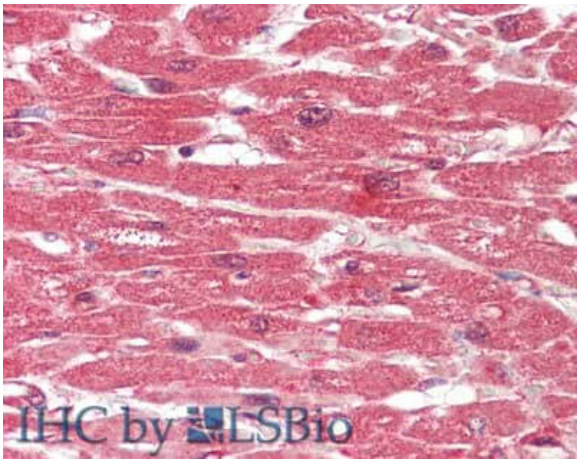
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	None
Stabilizer:	None

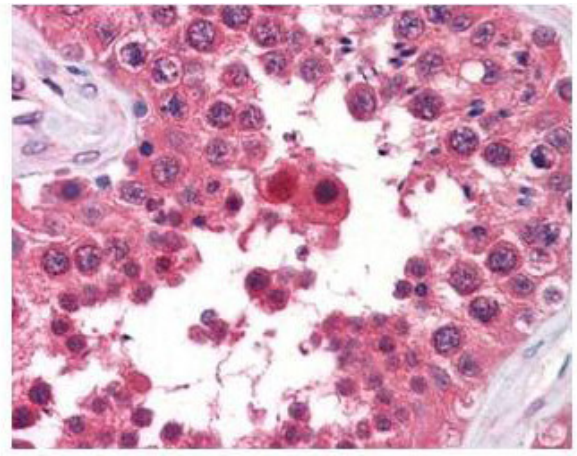
Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

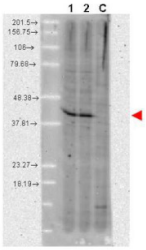
Images



Immunohistochemistry
Immunohistochemistry of Rat anti-AHA1 antibody. Tissue: human heart. Fixation: formalin fixed paraffin embedded. Antigen retrieval: not required. Primary antibody: anti-AHA1 antibody at 10 µg/mL for 1 h at RT. Secondary antibody: Peroxidase rat secondary antibody at 1:10,000 for 45 min at RT. Staining: AHA-1 as precipitated red signal with hematoxylin purple nuclear counterstain.



Immunohistochemistry
Rockland's anti-AHA1 monoclonal antibody was used at a 5-10 µg/mL to detect AHA1 in the seminiferous tubule of human testis (40X) showing moderate staining. Leydig cells showed faint to moderate staining. Expression of AHA1 is reported in many epithelial and lymphatic tissues, with cytoplasmic localization. This antibody showed moderate cytoplasmic staining of a variety of epithelial tissues and lymphoid organs such as spleen and tonsil with minimal background staining. The image shows the localization of the antibody as the precipitated red signal, with a hematoxylin purple nuclear counterstain. Tissue was formalin-fixed and paraffin embedded. Personal Communication, Vasiliki Demas, LifeSpanBiosciences, Seattle, WA.



Western Blot
Western blot using Rockland's anti-AHA1 monoclonal antibody shows detection of a band ~42 kDa in size corresponding to AHA1. Molecular weight markers are shown at the left. Lane 1: A431 whole cell lysate (p/n W09-000-361) and Lane 2: MCF-7 whole cell lysate (p/n W09-000-360). A control lane is shown where primary antibody was omitted from the incubation (lane C). For best results, block the membrane overnight with 3% BSA in TBS followed by reaction with primary antibody diluted 1:1,000 and use HRP conjugated anti-Rat IgG (p/n 612-103-120) secondary antibody diluted 1:20,000 in blocking buffer (p/n MB-070) for detection.

Disclaimer

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