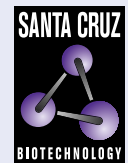


ARH (F-11): sc-514106



The Power to Question

BACKGROUND

ARH (autosomal recessive hypercholesterolemia protein), also known as LDLRAP1 (low density lipoprotein receptor adaptor protein 1), is a 308 amino acid cytoplasmic protein that contains one PID domain. ARH is an adapter protein required for efficient endocytosis of the LDL receptor (LDLR) from coated pits in polarized cells such as hepatocytes and lymphocytes. To do this, ARH acts to stabilize the interaction between the receptor and the structural components of the pits. While expressed at high levels in kidney, liver and placenta, ARH is expressed at low levels in brain, heart, muscle, colon, spleen, intestine, lung and leukocytes. Defects in the ARH gene are the cause of autosomal recessive hypercholesterolemia, a disorder caused by defective internalization of LDL receptors (LDLR) in the liver. Autosomal recessive hypercholesterolemia has the clinical features of familial hypercholesterolemia (FH), including severely elevated plasma LDL cholesterol, tuberous and tendon xanthomata, and premature atherosclerosis.

REFERENCES

1. Garcia, C.K., et al. 2001. Autosomal recessive hypercholesterolemia caused by mutations in a putative LDL receptor adaptor protein. *Science* 292: 1394-1398.
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4. Wilund, K.R., et al. 2002. Molecular mechanisms of autosomal recessive hypercholesterolemia. *Hum. Mol. Genet.* 11: 3019-3030.
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6. Mishra, S.K., et al. 2002. The autosomal recessive hypercholesterolemia (ARH) protein interfaces directly with the clathrin-coat machinery. *Proc. Natl. Acad. Sci. USA* 99: 16099-16104.
7. Mishra, S.K., et al. 2005. Functional dissection of an AP-2 β 2 appendage-binding sequence within the autosomal recessive hypercholesterolemia protein. *J. Biol. Chem.* 280: 19270-19280.
8. Sirinian, M.I., et al. 2005. Adaptor protein ARH is recruited to the plasma membrane by low density lipoprotein (LDL) binding and modulates endocytosis of the LDL/LDL receptor complex in hepatocytes. *J. Biol. Chem.* 280: 38416-38423.

CHROMOSOMAL LOCATION

Genetic locus: LDLRAP1 (human) mapping to 1p36.11.

SOURCE

ARH (F-11) is a mouse monoclonal antibody raised against amino acids 74-192 mapping within an internal region of ARH of human origin.

PRODUCT

Each vial contains 200 μ g IgG₃ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

ARH (F-11) is recommended for detection of ARH of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Suitable for use as control antibody for ARH siRNA (h): sc-106784, ARH shRNA Plasmid (h): sc-106784-SH and ARH shRNA (h) Lentiviral Particles: sc-106784-V.

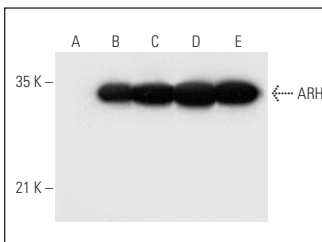
Molecular Weight of ARH: 35 kDa.

Positive Controls: ARH (h): 293T Lysate: sc-114378, U-87 MG cell lysate: sc-2411 or HeLa nuclear extract: sc-2120.

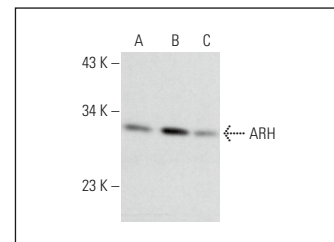
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



ARH (F-11): sc-514106. Western blot analysis of ARH expression in non-transfected 293T: sc-117752 (A), human ARH transfected 293T: sc-114378 (B), Hep G2 (C) and U-87 MG (D) whole cell lysates and HeLa nuclear extract (E).



ARH (F-11): sc-514106. Western blot analysis of ARH expression in Hep G2 (A), NCI-H460 (B) and SCC-4 (C) whole cell lysates.

STORAGE

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

RESEARCH USE

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