SANTA CRUZ BIOTECHNOLOGY, INC.

AADAC (G-12): sc-390591

BACKGROUND

The assembly of very-low-density lipoproteins (VLDLs) in the secretory apparatus of the hepatocyte relies on the mobilization of triacylglycerol (TAG) from the cytosolic pool by lipolysis and re-esterification. However, some of the re-esterified TAG products are returned to the cytosolic pool in the liver, which protects vulnerable body tissues from excess lipotoxic non-esterified fatty acids in the plasma. Some of the lipases involved in this process include arylacetamide deacetylase (AADAC) and its related proteins AADACL1 and AADACL2. AADAC, a single pass type II membrane protein of the endoplasmic reticulum, is expressed in hepatocytes, intestinal mucosal cells, pancreas and adrenal gland. It plays an important role in the metabolic activation of arylamine substrates to ultimate carcinogens. AADACL1 hydrolyzes the metabolic intermediate 2-acetyl monoalkylglycerol, and its inactivation results in disruption of ether lipid metabolism in cancer cells and impaired cell migration and tumor growth.

REFERENCES

1. Probst, M.R., et al. 1991. Purification and characterization of a human liver arylacetamide deacetylase. Biochem. Biophys. Res. Commun. 177: 453-459.
2. Probst, M.R., et al. 1994. Human liver arylacetamide deacetylase. Molecular cloning of a novel esterase involved in the metabolic activation of arylamine carcinogens with high sequence similarity to hormone-sensitive lipase. J. Biol. Chem. 269: 21650-21656.
3. Yamazaki, K., et al. 1997. Radiation hybrid mapping of human arylacetamide deacetylase (AADAC) locus to chromosome 3. Genomics 44: 248-250.

CHROMOSOMAL LOCATION

Genetic locus: AADAC (human) mapping to 3q25.1.

SOURCE

AADAC (G-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 289-311 of AADAC of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

AADAC (G-12) is available conjugated to agarose (sc-390591 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390591 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390591 PE), fluorescein (sc-390591 FITC), Alexa Fluor® 488 (sc-390591 AF488), Alexa Fluor® 546 (sc-390591 AF546), Alexa Fluor® 594 (sc-390591 AF594) or Alexa Fluor® 647 (sc-390591 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390591 AF680) or Alexa Fluor® 790 (sc-390591 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390591 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

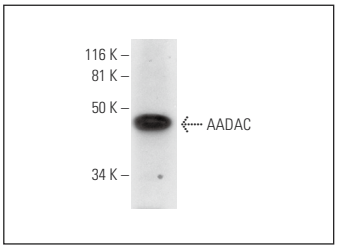
AADAC (G-12) is recommended for detection of AADAC of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for AADAC siRNA (h): sc-77919, AADAC shRNA Plasmid (h): sc-77919-SH and AADAC shRNA (h) Lentiviral Particles: sc-77919-V.

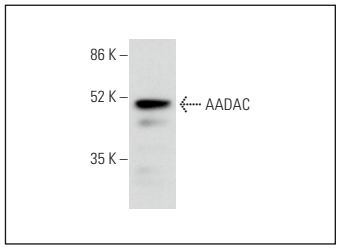
Molecular Weight of AADAC: 45 kDa.

Positive Controls: human liver extract: sc-363766 or human small intestine extract: sc-364225.

DATA



AADAC (G-12): sc-390591. Western blot analysis of AADAC expression in human liver tissue extract.



AADAC (G-12): sc-390591. Western blot analysis of AADAC expression in human small intestine tissue extract.

SELECT PRODUCT CITATIONS

1. Filip, R., et al. 2021. Profiling of microRNA targets using activity-based protein profiling: linking enzyme activity to microRNA-185 function. Cell Chem. Biol. 28: 202-212.e6.
2. Honda, S., et al. 2021. Hydrolase activities of cynomolgus monkey liver microsomes and recombinant CES1, CES2, and AADAC. Eur. J. Pharm. Sci. 161: 105807.
3. Morikawa, T., et al. 2022. PPARα regulates the expression of human arylacetamide deacetylase involved in drug hydrolysis and lipid metabolism. Biochem. Pharmacol. 199: 115010.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.