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AADAC Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6805b

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	P22760
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB19675
Calculated MW	45734
Antigen Region	273-300

Additional Information

Gene ID	13
Other Names	Arylacetamide deacetylase, AADAC, DAC
Target/Specificity	This AADAC antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 273-300 amino acids from the C-terminal region of human AADAC.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	AADAC Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	AADAC (HGNC:17)
Function	Catalyzes the hydrolysis of ester and amide bonds and is largely involved in prodrugs activation, xenobiotic detoxification or toxicity, and, in some contexts, lipid and indole metabolism (PubMed:17936933, PubMed:18034159, PubMed:19339378, PubMed:2043131, PubMed:21856291, PubMed:22207054,

PubMed:22415931, PubMed:23542347, PubMed:24125761, PubMed:24464802, PubMed:26164127, PubMed:27422753, PubMed:33446525, PubMed:34450168, PubMed:37002641, PubMed:8063807). Prefers compounds with relatively small acyl groups, especially compounds with acetyl group (PubMed:26164127). Participates in the hydrolysis of clinical drugs including acetyl esters compounds such as eslicarbazepine, abiraterone and rifamycins (rifampicin, rifabutin, and rifapentine) and N-acetylarylamine compounds such as flutamide, N-monoacetyldapsone, and phenacetin (PubMed:19339378, PubMed:21856291, PubMed:22207054, PubMed:22415931, PubMed:24125761, PubMed:24464802, PubMed:26164127, PubMed:27422753). Participates in the hydrolysis of carcinogen such as 2-acetylaminofluorene (AAF) and propanil (PubMed:2043131, PubMed:26164127, PubMed:8063807). In addition, plays a role in lipid metabolism by hydrolyzing newly synthesized diacylglycerol, so limiting triacylglycerol synthesis for cytoplasmic storage droplet formation and for VLDL assembly (PubMed:23542347). Can also catalyzes the deacetylation of cholesterol acetate (PubMed:18034159). Moreover can play a role in metabolism of pineal indoles by catalyzing the deacetylation of N-acetylarylalkylamine compounds including N-acetylserotonin (NAS), melatonin and N- acetyltryptamine, NAS conversion being the most efficient reaction (PubMed:37002641).

Cellular Location

Endoplasmic reticulum membrane; Single-pass type II membrane protein {ECO:0000250|UniProtKB:Q7M370}. Microsome membrane; Single-pass type II membrane protein {ECO:0000250|UniProtKB:Q7M370}

Tissue Location

Detected in liver (at protein level). Mainly expressed in liver, small intestine, colon, adrenal gland and bladder

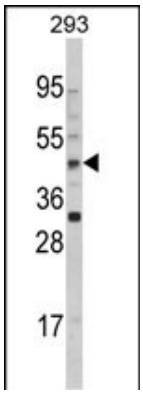
Background

Arylacetamide deacetylation is an important enzyme activity in the metabolic activation of arylamine substrates to ultimate carcinogens.

References

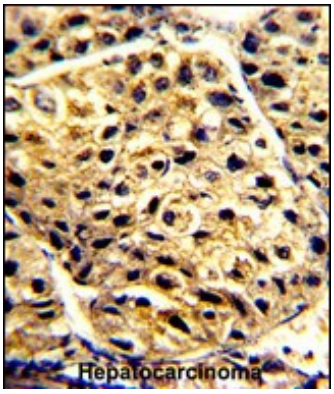
Saito,S., et.al., J. Hum. Genet. 48 (5), 249-270 (2003)

Images

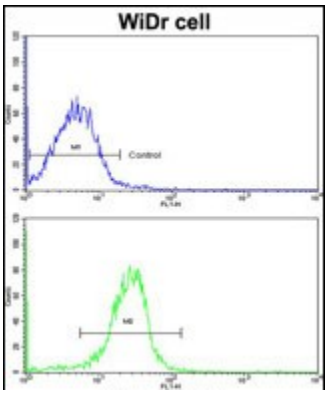


Western blot analysis of AADAC Antibody (C-term) (Cat. #AP6805b) in 293 cell line lysates (35ug/lane). AADAC (arrow) was detected using the purified Pab.

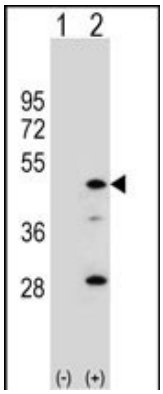
Formalin-fixed and paraffin-embedded human hepatocarcinoma with AADAC Antibody (C-term), which was peroxidase-conjugated to the secondary antibody,



followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Flow cytometric analysis of widr cells using AADAC Antibody (C-term)(bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



Western blot analysis of AADAC (arrow) using rabbit polyclonal AADAC Antibody (C-term) (Cat. #AP6805b). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the AADAC gene.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.