SANTA CRUZ BIOTECHNOLOGY, INC.

# NAT-1/2 (C-12): sc-47226

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

Arylamine N-acetyltransferases (NAT-1 and NAT-2) catalyze N- or O-acetylation of heterocyclic and arylamine substrates in the detoxification of a wide array of drugs. Certain alleles causing high levels of N-acetyltransferase activity have been associated with colon and urinary bladder cancers, as NAT's also bioactivate several known carcinogens. Both NAT-1 and NAT-2 are cytoplasmic proteins and play an active role in the detoxification of many arylamine and hydrazine drugs. N-acetylation polymorphism is determined by the level of NAT activity in liver tissues, and has been linked to the action and toxicity of drugs that contain amines. Human NAT-1 is the functional homolog of rodent NAT-2, while human NAT-2 is the functional homolog of rodent NAT-1.

## REFERENCES


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4. Deguchi, M., Yoshida, S., Kennedy, S., Ohara, N., Motoyama, S. and Maruo, T. 2005. Lack of association between endometriosis and N-acetyl transferase 1 (NAT1) and 2 (NAT2) polymorphisms in a Japanese population. J. Soc. Gynecol. Investig. 12: 208-213.


## CHROMOSOMAL LOCATION

Genetic locus: NAT1/NAT2 (human) mapping to 8p22; Nat1/Nat2 (mouse) mapping to 8 B3.3.

## SOURCE

NAT-1/2 (C-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of NAT-2 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-47226 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

NAT-1/2 (C-12) is recommended for detection of NAT-2 of mouse, rat and human origin, NAT-1 of human origin and, to a lesser extent, NAT-1 of mouse and rat origin by Western Blotting (starting dilution 1:200, 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 NAT-1 siRNA (h): sc-61154, NAT-2 siRNA (m): sc-61157, NAT-1 shRNA Plasmid (h): sc-61154-SH, NAT-2 shRNA Plasmid (m): sc-61157-SH, NAT-1 shRNA (h) Lentiviral Particles: sc-61154-V and NAT-1 shRNA (m) Lentiviral Particles: sc-61157-V.

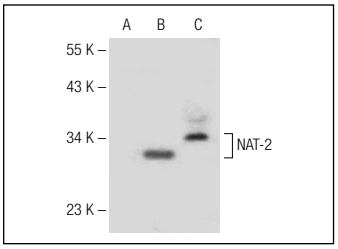
Molecular Weight of NAT-1/2: 34 kDa.

Positive Controls: NAT-2 (m): 293T Lysate: sc-121945, A549 cell lysate: sc-2413 or HeLa whole cell lysate: sc-2200.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA




NAT-1/2 (C-12): sc-47226. Western blot analysis of NAT-2 expression in non-transfected 293T: sc-117752 (**A**), mouse NAT-2 transfected 293T: sc-121945 (**B**) and A549 (**C**) whole cell lysates.

## RESEARCH USE

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