SANTA CRUZ BIOTECHNOLOGY, INC.

NAT-1/2 (H-52): sc-135158

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

1. Lanckriet, C., Bureau, J.J., Capdevielle, H., Gody, J.C., Olivier, T. and Siopathis, R.M. 1992. Morbidity and mortality in the pediatric service of Banqui (Central African Republic) during the year 1990. Implications for public health. Ann. Pediatr. 39:125-130.
2. Kiss, I., Nemeth, A., Bogner, B., Pajkos, G., Orsos, Z., Sandor, J., Csejtey, A., Faluhelyi, Z., Rodler, I. and Ember, I. 2004. Polymorphisms of glutathione-S-transferase and arylamine N-acetyltransferase enzymes and susceptibility to colorectal cancer. Anticancer Res. 24: 3965-3970.

CHROMOSOMAL LOCATION

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

SOURCE

NAT-1/2 (H-52) is a rabbit polyclonal antibody raised against amino acids 117-168 mapping within an internal region of NAT-1 of human origin.

PRODUCT

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

APPLICATIONS

NAT-1/2 (H-52) is recommended for detection of NAT-1 and NAT-2 of mouse, rat and human 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).

NAT-1/2 (H-52) is also recommended for detection of NAT-1 and NAT-2 in additional species, including porcine.

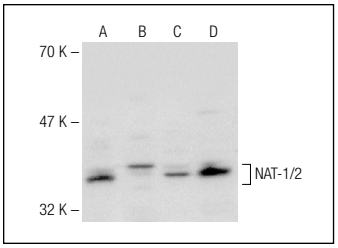
Molecular Weight of NAT-1/2: 34 kDa.

Positive Controls: NAT-2 (m): 293T Lysate: sc-121945, HeLa whole cell lysate: sc-2200 or MOLT-4 cell lysate: sc-2233.

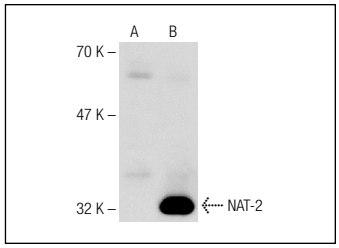
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



NAT-1/2 (H-52): sc-135158. Western blot analysis of NAT-1/2 expression in HeLa (**A**), A-431 (**B**), A549 (**C**) and MOLT-4 (**D**) whole cell lysates.



NAT-1/2 (H-52): sc-135158. Western blot analysis of NAT-2 expression in non-transfected: sc-117752 (**A**) and mouse NAT-2 transfected: sc-121945 (**B**) 293T 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.

PROTOCOLS

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

MONOS Satisfaction Guaranteed

Try **NAT-1/2 (G-5): sc-137204** or **NAT-1/2 (H-7): sc-271797**, our highly recommended monoclonal alternatives to NAT-1/2 (H-52).