

NAT-2 (m): 293T Lysate: sc-121945

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., et al. 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., et al. 2004. Polymorphisms of glutathione-S-transferase and arylamine N-acetyltransferase enzymes and susceptibility to colorectal cancer. *Anticancer Res.* 24: 3965-3970.
3. Li, Y.C., et al. 2005. N-acetyltransferase is involved in baicalein-induced N-acetylation of 2-aminofluorene and DNA-2-aminofluorene adduct formation in human leukemia HL-60 cells. *In Vivo* 19: 399-405.
4. Deguchi, M., et al. 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.
5. Zhang, X.F., et al. 2005. Are polymorphisms of N-acetyltransferase genes susceptible to primary liver cancer in Luoyang, China? *World J. Gastroenterol.* 11: 1457-1462.
6. Broberg, K., et al. 2005. Constitutional short telomeres are strong genetic susceptibility markers for bladder cancer. *Carcinogenesis* 26: 1263-1271.

CHROMOSOMAL LOCATION

Genetic locus: Nat2 (mouse) mapping to 8 B3.3.

PRODUCT

NAT-2 (m): 293T Lysate represents a lysate of mouse NAT-2 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

NAT-2 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive NAT-2 antibodies. Recommended use: 10-20 µl per lane.

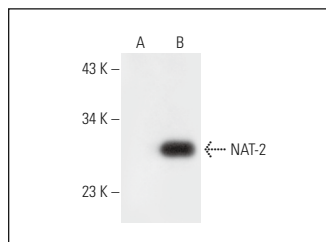
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

NAT-1/2 (A-1): sc-393937 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse NAT-2 expression in NAT-2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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.

DATA



NAT-1/2 (A-1): sc-393937. 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 -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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.