SANTA CRUZ BIOTECHNOLOGY, INC.

N6AMT2 (H-3): sc-390240

BACKGROUND

N6AMT2 (N-6 adenine-specific DNA methyltransferase 2), also known as ESP13, is a 214 amino acid protein that is encoded by a gene located on human chromosome 13q12.11. Comprising nearly 4% of the human genome, chromosome 13 contains around 114 million base pairs and encodes over 400 genes. Chromosome 13 houses key tumor suppressor genes, including BRCA2 and RB1, which are associated with breast cancer susceptibility and retinoblastoma, respectively. Trisomy 13, also known as Patau syndrome, is deadly and the few who survive past one year suffer from permanent neurologic defects, difficulty eating and vulnerability to serious respiratory infections.

REFERENCES

1. Dunham, A., et al. 2004. The DNA sequence and analysis of human chromosome 13. Nature 428: 522-528.
2. Hsu, H.F. and Hou, J.W. 2007. Variable expressivity in Patau syndrome is not all related to trisomy 13 mosaicism. Am. J. Med. Genet. A 143A: 1739-1748.
3. Hall, H.E., et al. 2007. The origin of trisomy 13. Am. J. Med. Genet. A 143A: 2242-2248.

CHROMOSOMAL LOCATION

Genetic locus: EEF1AKMT1 (human) mapping to 13q12.11; Eef1akmt1 (mouse) mapping to 14 C3.

SOURCE

N6AMT2 (H-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 71-103 near the N-terminus of N6AMT2 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.

N6AMT2 (H-3) is available conjugated to agarose (sc-390240 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390240 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390240 PE), fluorescein (sc-390240 FITC), Alexa Fluor® 488 (sc-390240 AF488), Alexa Fluor® 546 (sc-390240 AF546), Alexa Fluor® 594 (sc-390240 AF594) or Alexa Fluor® 647 (sc-390240 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390240 AF680) or Alexa Fluor® 790 (sc-390240 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390240 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

N6AMT2 (H-3) is recommended for detection of N6AMT2 of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (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 N6AMT2 siRNA (h): sc-106278, N6AMT2 siRNA (m): sc-149781, N6AMT2 shRNA Plasmid (h): sc-106278-SH, N6AMT2 shRNA Plasmid (m): sc-149781-SH, N6AMT2 shRNA (h) Lentiviral Particles: sc-106278-V and N6AMT2 shRNA (m) Lentiviral Particles: sc-149781-V.

Molecular Weight (predicted) of N6AMT2: 25 kDa.

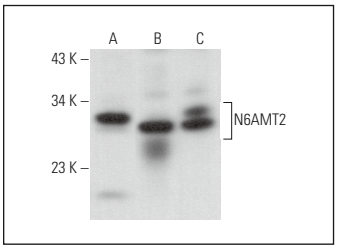
Molecular Weight (observed) of N6AMT2: 33 kDa.

Positive Controls: H4 cell lysate: sc-2408, rat brain extract: sc-2392 or mouse postnatal brain tissue extract.

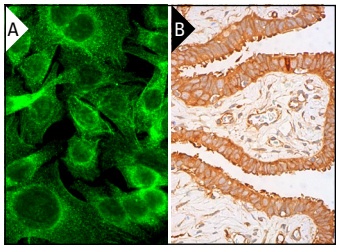
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



N6AMT2 (H-3): sc-390240. Western blot analysis of N6AMT2 expression in H4 whole cell lysate (**A**) and mouse postnatal brain (**B**) and rat brain (**C**) tissue extracts.



N6AMT2 (H-3): sc-390240. Immunofluorescence staining of formalin-fixed SW480 cells showing membrane and cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing cytoplasmic staining of glandular cells. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214. Detected with m-IgGκ BP-B: sc-516142 and ImmunoCruz® ABC Kit: sc-516216 (**B**).

RESEARCH USE

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