

HEMK2 (1C4): sc-517120

BACKGROUND

HEMK2 (hemK methyltransferase family member 2), also known as N6AMT1 (N-6 adenine-specific DNA methyltransferase 1), MTQ2 or N6AMT, is a 214 amino acid protein that belongs to the methyltransferase superfamily and exists as multiple alternatively spliced isoforms. The gene encoding HEMK2 maps to human chromosome 21, which houses approximately 300 genes and comprises nearly 1.5% of the human genome. Chromosome 21-associated disorders include Alzheimer's disease, amyotrophic lateral sclerosis and, most notably, Down syndrome (also known as trisomy 21).

REFERENCES

1. Müller, S., et al. 2000. Molecular cytogenetic dissection of human chromosomes 3 and 21 evolution. *Proc. Natl. Acad. Sci. USA* 97: 206-211.
2. Mao, R., et al. 2005. Primary and secondary transcriptional effects in the developing human Down syndrome brain and heart. *Genome Biol.* 6: R107.
3. Robakis, N.K. 2006. The discovery and mapping to chromosome 21 of the Alzheimer's amyloid gene: history revised. *J. Alzheimers Dis.* 10: 453-455.
4. Ait Yahya-Graison, E., et al. 2007. Classification of human chromosome 21 gene-expression variations in Down syndrome: impact on disease phenotypes. *Am. J. Hum. Genet.* 81: 475-491.
5. Peterson, L.F., et al. 2007. Acute myeloid leukemia with the 8q22;21q22 translocation: secondary mutational events and alternative t(8;21) transcripts. *Blood* 110: 799-805.
6. Ryoo, S.R., et al. 2007. DYRK1A-mediated hyperphosphorylation of Tau: a functional link between Down syndrome and Alzheimer's disease. *J. Biol. Chem.* 282: 34850-34857.
7. Figaro, S., et al. 2008. HemK2 protein, encoded on human chromosome 21, methylates translation termination factor eRF1. *FEBS Lett.* 582: 2352-2356.

CHROMOSOMAL LOCATION

Genetic locus: N6AMT1 (human) mapping to 21q21.3.

SOURCE

HEMK2 (1C4) is a mouse monoclonal antibody raised against amino acids 87-186 representing partial length HEMK2 of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

PROTOCOLS

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

APPLICATIONS

HEMK2 (1C4) is recommended for detection of HEMK2 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

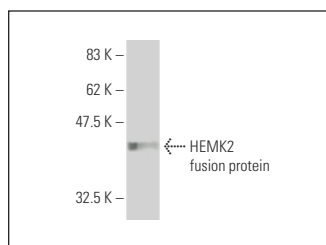
Suitable for use as control antibody for HEMK2 siRNA (h): sc-91423, HEMK2 shRNA Plasmid (h): sc-91423-SH and HEMK2 shRNA (h) Lentiviral Particles: sc-91423-V.

Molecular Weight of HEMK2: 23 kDa.

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, 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).

DATA



HEMK2 (1C4): sc-517120. Western blot analysis of human recombinant HEMK2 fusion protein.

RESEARCH USE

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