

HEMK1 (C-16): sc-99921

BACKGROUND

HEMK1 (HemK methyltransferase family member 1) is a 338 amino acid mitochondrial protein that belongs to the N5-glutamine methyltransferase family. Functioning as a N5-glutamine methyltransferase, HEMK1 is required for the methylation of the GGQ triplet of the mitochondrial translation release factor MTRF1L. The gene encoding HEMK1 maps to human chromosome 3, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci. Key tumor suppressing genes on chromosome 3 include those that encode the apoptosis mediator RASSF1, the cell migration regulator HYAL1 and the angiogenesis suppressor SEMA3B. Marfan Syndrome, porphyria, von Hippel-Lindau syndrome, osteogenesis imperfecta and Charcot-Marie-Tooth disease are a few of the numerous genetic diseases associated with chromosome 3.

REFERENCES

- Müller, S., et al. 2000. Molecular cytogenetic dissection of human chromosomes 3 and 21 evolution. *Proc. Natl. Acad. Sci. USA* 97: 206-211.
- Braga, E.A., et al. 2003. New tumor suppressor genes in hot spots of human chromosome 3: new methods of identification. *Mol. Biol.* 37: 194-211.
- Tsend-Ayush, E., et al. 2004. Plasticity of human chromosome 3 during primate evolution. *Genomics* 83: 193-202.
- Yue, Y., et al. 2005. Comparative cytogenetics of human chromosome 3q21.3 reveals a hot spot for ectopic recombination in hominoid evolution. *Genomics* 85: 36-47.
- Darai, E., et al. 2005. Evolutionarily plastic regions at human 3p21.3 coincide with tumor breakpoints identified by the "elimination test". *Genomics* 86: 1-12.
- Yue, Y., et al. 2005. Genomic structure and paralogous regions of the inversion breakpoint occurring between human chromosome 3p12.3 and orangutan chromosome 2. *Cytogenet. Genome Res.* 108: 98-105.

CHROMOSOMAL LOCATION

Genetic locus: HEMK1 (human) mapping to 3p21.2.

SOURCE

HEMK1 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of HEMK1 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.

Blocking peptide available for competition studies, sc-99921 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-99921 X, 200 µg/0.1 ml.

RESEARCH USE

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

APPLICATIONS

HEMK1 (C-16) is recommended for detection of HEMK1 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)], 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); non cross-reactive with family member HEMK2.

HEMK1 (C-16) is also recommended for detection of HEMK1 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for HEMK1 siRNA (h): sc-78067, HEMK1 shRNA Plasmid (h): sc-78067-SH and HEMK1 shRNA (h) Lentiviral Particles: sc-78067-V.

HEMK1 (C-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

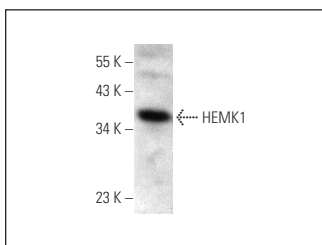
Molecular Weight of HEMK1: 38 kDa.

Positive Controls: PC-3 cell lysate: sc-2220.

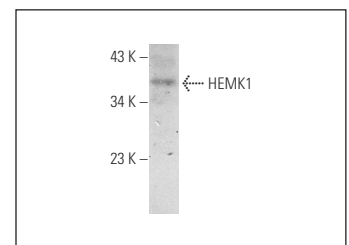
RECOMMENDED SECONDARY REAGENTS

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



HEMK1 (C-16): sc-99921. Western blot analysis of HEMK1 expression in PC-3 whole cell lysate.



HEMK1 (C-16): sc-99921. Western blot analysis of HEMK1 expression in 293 whole cell lysate.

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 or our catalog for detailed protocols and support products.