

# nm23-H7 (K-16): sc-82258

## BACKGROUND

nm23-H7, also known as NME7 (non-metastatic cells 7), is a 376 amino acid protein that contains one DM10 domain and belongs to the NDK family. Using magnesium as a cofactor, nm23-H7 functions to catalyze the ATP-dependent creation of nucleoside triphosphates, thereby playing an essential role in metabolic pathways throughout the body. The gene encoding nm23-H7 maps to human chromosome 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome. Chromosome 1 houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome. Aberrations in chromosome 1 are found in a variety of cancers, including head and neck cancer, malignant melanoma and multiple myeloma.

## REFERENCES

1. Lacombe, M.L., et al. 2000. The human Nm23/nucleoside diphosphate kinases. *J. Bioenerg. Biomembr.* 32: 247-258.
2. Hartsough, M.T., et al. 2000. Nm23/nucleoside diphosphate kinase in human cancers. *J. Bioenerg. Biomembr.* 32: 301-308.
3. Kimura, N., et al. 2000. Regulation of cellular functions by nucleoside diphosphate kinases in mammals. *J. Bioenerg. Biomembr.* 32: 309-315.
4. Weise, A., et al. 2005. New insights into the evolution of chromosome 1. *Cytogenet. Genome Res.* 108: 217-222.
5. Marzin, Y., et al. 2006. Chromosome 1 abnormalities in multiple myeloma. *Anticancer Res.* 26: 953-959.
6. Mönig, S.P., et al. 2007. Clinical significance of nm23 gene expression in gastric cancer. *Anticancer Res.* 27: 3029-3033.
7. Hippe, H.J., et al. 2007. Regulation of cardiac cAMP synthesis and contractility by nucleoside diphosphate kinase B/G protein  $\beta$   $\gamma$  dimer complexes. *Circ. Res.* 100: 1191-1199.

## CHROMOSOMAL LOCATION

Genetic locus: NME7 (human) mapping to 1q24.2; Nme7 (mouse) mapping to 1 H2.2.

## SOURCE

nm23-H7 (K-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of nm23-H7 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-82258 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

nm23-H7 (K-16) is recommended for detection of nm23-H7 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

nm23-H7 (K-16) is also recommended for detection of nm23-H7 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for nm23-H7 siRNA (h): sc-75935, nm23-H7 siRNA (m): sc-75936, nm23-H7 shRNA Plasmid (h): sc-75935-SH, nm23-H7 shRNA Plasmid (m): sc-75936-SH, nm23-H7 shRNA (h) Lentiviral Particles: sc-75935-V and nm23-H7 shRNA (m) Lentiviral Particles: sc-75936-V.

Molecular Weight of nm23-H7: 42 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

## 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) 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.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.