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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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# NASP (m): 293T Lysate: sc-125689

## BACKGROUND

Histones, the chief components of chromatin, are required for the formation of core nucleosomes around which DNA can wind and they play an essential role in DNA condensation and gene regulation. The transport of histones to the nucleus is crucial to ensuring proper nucleosome assembly and, ultimately, DNA replication. NASP (nuclear autoantigenic sperm protein) is a 788 amino acid protein that localizes to both the nucleus and the cytoplasm and contains 3 TPR repeats. Expressed as multiple alternatively-spliced isoforms, one of which is testis- and sperm-specific (tNASP) and the other expressed in somatic cells (sNASP), NASP functions as a Histone H1 binding protein that mediates histone transport to the nucleus and is required for normal cell cycle progression and cellular proliferation. Due to its testicular expression and important role in DNA replication and cell cycle events, NASP is necessary for spermatogenesis and normal development. Upon DNA damage, NASP may be phosphorylated by ATM or ATR.

## REFERENCES

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2. Batova, I.N., et al. 2000. Analysis of the autoimmune epitopes on human testicular NASP using recombinant and synthetic peptides. *Clin. Exp. Immunol.* 121: 201-209.
3. Richardson, R.T., et al. 2000. Characterization of the Histone H1-binding protein, NASP, as a cell cycle-regulated somatic protein. *J. Biol. Chem.* 275: 30378-30386.
4. Minami, N., et al. 2001. Analysis of gene expression in mouse 2-cell embryos using Fluorescein differential display: comparison of culture environments. *Biol. Reprod.* 64: 30-35.
5. Richardson, R.T., et al. 2001. Comparison of mouse and human NASP genes and expression in human transformed and tumor cell lines. *Gene* 274: 67-75.
6. Alekseev, O.M., et al. 2003. Overexpression of the linker histone-binding protein tNASP affects progression through the cell cycle. *J. Biol. Chem.* 278: 8846-8852.
7. Richardson, R.T., et al. 2006. Nuclear autoantigenic sperm protein (NASP), a linker histone chaperone that is required for cell proliferation. *J. Biol. Chem.* 281: 21526-21534.
8. Finn, R.M., et al. 2008. sNASP, a Histone H1-specific eukaryotic chaperone dimer that facilitates chromatin assembly. *Biophys. J.* 95: 1314-1325.
9. Wang, H., et al. 2008. Expanded binding specificity of the human histone chaperone NASP. *Nucleic Acids Res.* 36: 5763-5772.

## CHROMOSOMAL LOCATION

Genetic locus: Nasp (mouse) mapping to 4 D1.

## PRODUCT

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

## APPLICATIONS

NASP (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive NASP 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.

## 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](http://www.scbt.com) for detailed protocols and support products.