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Produktinformation



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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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PRODUCT INFORMATION



Citrullinated Nucleophosmin (human, recombinant)

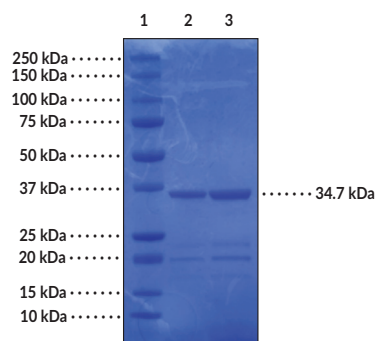
Item No. 37780

Overview and Properties

Synonyms: NPM, NPM1, Nucleolar Phosphoprotein B23, Nucleolar Protein NO38, Numatrin,
Source: Recombinant human N-terminal His-TEV-tagged NPM1 expressed in *E. coli* and citrullinated by PAD4
Amino Acids: 2-294
Uniprot No.: P06748
Molecular Weight: 34.7 kDa
Storage: -80°C (as supplied)
Stability: ≥6 months
Purity: ≥60% estimated by SDS-PAGE
Supplied in: 50 mM HEPES, pH 7.8, with 150 mM sodium chloride and 10% glycerol
Protein Concentration: *batch specific* mg/ml

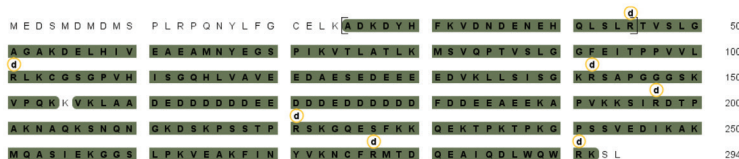
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Images

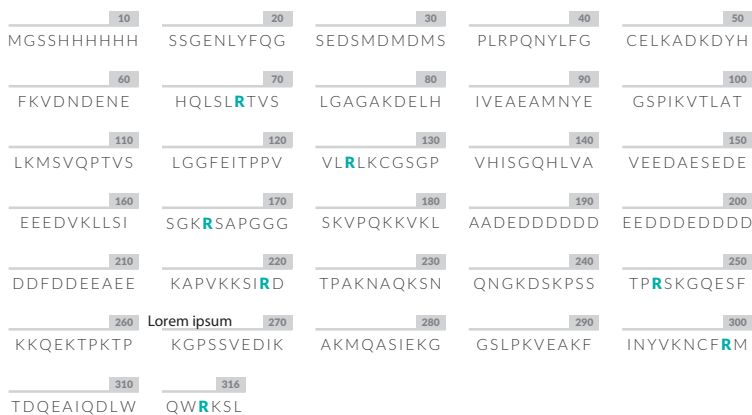


Lane 1: MW Markers
Lane 2: Citrullinated NPM1 (2 µg)
Lane 3: Citrullinated NPM1 (4 µg)
SDS-PAGE Analysis of Citrullinated Nucleophosmin.

The target protein was detected with 91% sequence coverage:



Citrullinated Nucleophosmin: PTM mass spec profiling



Citrullinated Nucleophosmin (human, recombinant) (Item No. 37780): PTM mass spec profiling. The targeted protein was detected with 91% sequence coverage.

Citrullination sites shown are representative of typical results. Batch-to-batch variations may occur.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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PRODUCT INFORMATION



Description

Nucleophosmin is a nucleolar phosphoprotein that is involved in diverse biological processes, including ribosome maturation, DNA repair, and mitotic spindle assembly.¹ It is highly post-translationally modified and composed of an oligomerization domain, which contains two nuclear export signals, three acidic domains, an intrinsically disordered region, which contains two nuclear localization signals, and a C-terminal RNA-binding domain.^{1,2} Nucleophosmin is ubiquitously expressed and shuttles between the nucleolus and cytoplasm; however, alternative splicing of *NPM1* produces a variant that lacks the RNA-binding domain and nucleolar localization signal and is instead localized throughout the nucleus.¹⁻³ Nucleophosmin has histone- and protein chaperone activity and plays a role in ribosome assembly and export, centrosome duplication, cell cycle control, the stress response, and embryogenesis.¹ Nucleophosmin citrullinated by PAD4 increases p53 stability and radiation sensitivity in a thyroid cancer cell line exposed to radiation.⁴ This product contains purified nucleophosmin (human, recombinant) (Item No. 37621) that has been modified with PAD4, which is subsequently depleted by affinity chromatography.

References

1. Cela, I., Di Matteo, A., and Federici, L. Nucleophosmin in Its interaction with ligands. *Int. J. Mol. Sci.* **21(14)**, 4885 (2020).
2. Okuwaki, M. The structure and functions of NPM1/Nucleophosmin/B23, a multifunctional nucleolar acidic protein. *J. Biochem.* **143(4)**, 441-448 (2008).
3. Cordell, J.L., Pulford, K.A., Bigerna, B., *et al.* Detection of normal and chimeric nucleophosmin in human cells. *Blood* **93(2)**, 632-642 (1999).
4. Na, J., Lee, C.-H., Chung, J.-K., *et al.* Overexpression of both human sodium iodide symporter (NIS) and BRG1-bromodomain synergistically enhances radioiodine sensitivity by stabilizing p53 through NPM1 expression. *Int. J. Mol. Sci.* **24(3)**, 2761 (2023).

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