SZABO SCANDIC

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Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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PRODUCT INFORMATION

Citrullinated Histone H4 (human, recombinant; His-tagged)

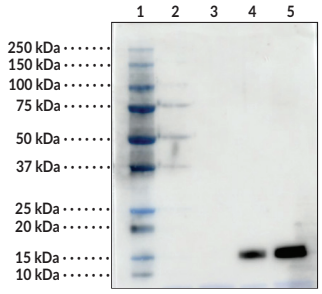
Item No. 38258

Overview and Properties

Source:	Recombinant human N-terminal His-tagged histone H4 expressed in *E. coli*, citrullinated with recombinant human PAD4
Amino Acids:	1-103 (full length)
Uniprot No.:	P62805
Molecular Weight:	13.4 kDa
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	≥80% estimated by SDS-PAGE
Supplied in:	A solution in water
Protein Concentration:	***batch specific*** mg/ml

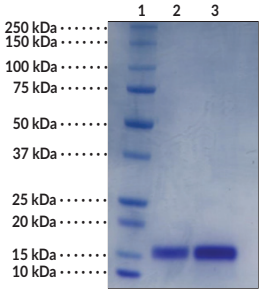
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Images



1:10,000, SA-HRP

Lane 1: MW Markers
Lane 2: Histone H4 (50 ng)
Lane 3: Histone H4 (100 ng)
Lane 4: Citrullinated histone H4 (50 ng)
Lane 5: Citrullinated histone H4 (100 ng)



Citrullinated histone H4, purity >90%

Lane 1: MW Markers
Lane 2: 2 µg
Lane 3: 4 µg

Site	Modification	Best Ascore	Localization Probability	65875 SpC
R17	Deamidated	1,000.00	1	1
R24	Deamidated	1,000.00	1	1
R44	Deamidated	116.83	1	18
R56	Deamidated	1,000.00	1	5
R57	Deamidated	1,000.00	1	2
R60	Deamidated	1,000.00	1	2
R61	Deamidated	1,000.00	1	3
R66	Deamidated	1,000.00	1	7
R76	Deamidated	1,000.00	1	8
R88	Deamidated	79.89	1	1
R99	Deamidated	1,000.00	1	4
R113	Deamidated	1,000.00	1	2
R116	Deamidated	1,000.00	1	2

There were 13 citrullinated sites detected, and the modified residues are indicated with a "d" above the Arg residue. The following table lists the sites along with the best Ascore, localization probability, and the number of spectra (SpC) providing evidence for each site.

The target protein was detected with 96% sequence coverage.

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PRODUCT INFORMATION

Description

Histone H4 is one of four core histone proteins that is involved in the organization of DNA into chromatin.[1] Histones are subject to a variety of post-translational modifications (PTMs), such as methylation, acetylation, and citrullination, that can influence chromatin structure and regulate gene transcription. Histone H4 can be citrullinated at the arginine residue at position 3 (H4R3) by peptidyl arginine deiminase 4 (PAD4; Item No. 10500).[2] Citrullination of H4R3 increases in U2OS cells following induction of DNA damage by adriamycin (doxorubicin; Item No. 15007) and is localized near fragmented nuclei.[3] H4R3 citrullination is associated with smaller tumor size and inversely associated with p53 levels in tumor tissue samples derived from patients with non-small cell lung cancer (NSCLC). Citrullinated histone H4 is present in neutrophil extracellular traps (NETs) generated by stimulation of granulocytes with phorbol 12-myristate 13-acetate (PMA; Item No. 10008014) and can be recognized by autoantibodies present in the serum of patients with rheumatoid arthritis.[4] This product contains purified histone H4 (human, recombinant; His-tagged) (Item No. 38257) that has been modified with PAD4, which is subsequently depleted by affinity chromatography.

References

1. Wang, Y., Li, M., Stadler, S., *et al.* Histone hypercitrullination mediates chromatin decondensation and neutrophil extracellular trap formation. *J. Cell Biol.* **184(2)**, 205-213 (2009).
2. Fuhrmann, J. and Thompson, P.R. Protein arginine methylation and citrullination in epigenetic regulation. *ACS Chem. Biol.* **11(3)**, 654-668 (2016).
3. Tanikawa, C., Espinosa, M., Suzuki, A., *et al.* Regulation of histone modification and chromatin structure by the p53-PADI4 pathway. *Nat. Commun.* **3:676**, (2012).
4. Pratesi, F., Dioni, I., Tommasi, C., *et al.* Antibodies from patients with rheumatoid arthritis target citrullinated histone 4 contained in neutrophils extracellular traps. *Ann. Rheum. Dis.* **73(7)**, 1414-1422 (2014).

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