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Product no AS10 710

Anti-H3 | Histone H3 (rabbit antibody) (nuclear marker)

Product information

Immunogen	KLH-conjugated synthetic peptide derived from known H3 sequences, inluding *Arabidopsis thaliana* H3.3 P59169 (At4g40030, At4g40040, At5g10980), H3.2 P59226 (At1g09200, At3g27360, At5g10390, At5g10400, At5g65360), H3-like 2 Q9FXI7 (At1g19890)
Host	Rabbit
Clonality	Polyclonal
Purity	Serum
Format	Lyophilized
Quantity	50 µl
Reconstitution	For reconstitution add 50 µl of sterile water
Storage	Store lyophilized/reconstituted at -20°C; once reconstituted make aliquots to avoid repeated freeze-thaw cycles. Please remember to spin the tubes briefly prior to opening them to avoid any losses that might occur from material adhering to the cap or sides of the tube.
Additional information	Cellular **[compartment marker]** of nucleoplasm, loading control antibody for *Chlamydomonas reinhardtii*

Application information

Recommended dilution	1 : 100-1 : 500 (ICC), 2 µl of antibody/500 µl solution (ChIp-qPCR), 1: 500 (IF), 1 : 5000 (WB)
Expected | apparent MW	15 | 17 kDa
Confirmed reactivity	*Arabidopsis thaliana, Botrytis cinerea, Brassica oleracea, Camellia sinensis, Capsicum annuum, Cicer arietinum* L., *Chlamydomonas acidophila, Chlamydomonas reinhardtii, Cucumis sativus L cv Suyo, Cucurbita pepo L. var. cylindrica, Hordeum vulgare,* human, *Nicotiana benthamiana, Oryza sativa, Phalaenopsis equestris, Phaeodactylum tricornutum, Physcomitrium patens, Salicornia europaea, Stevia rebaudiana, Solanum lycopersicum, Solanum sogarandinum, Solanum tuberosum, Vicia faba, Zea mays*
Predicted reactivity	*Brachypodium distachyon, Brassica napus*, *Cyanidioschyzon merolae*, *Daucus carota*, *Emiliania huxleyi*, *Fagopyrum tataricum* Gaertn., *Galdieria sulphuraria*, *Glycine max, Lolium multiflorum, Nannochloropsis gaditana, Nicotiana tabacum, Malus domestica, Medicago sativa, Oryza sativa, Ostreococcus sp. , Pinus pinaster, Pisum sativum, Populus* sp.*, Porphyridium purpureum*, *Saccharum sp., Sorghum bicolor, Triticum aestivum, Vitis vinifera, Volvox sp.* Species of your interest not listed? Contact us
Not reactive in	*Cyanophora paradoxa*
Additional information	Specific fluorescence in ICC has been observed for interphase nuclei as well as around centromer region (where Ser10 of histone H3 is phosphorylated) in mitotic chromosomes
Selected references	Dalmadi et al. (2026). Tissue specific RISC-loading reassesses small RNA functionality in developing pepper fruit. Plant Mol Biol. 2026 Jul 11;116(4):69. doi: 10.1007/s11103-026-01742-6. Sánchez-Vicente et al. (2026). Redox-mediated regulation of ABSCISIC ACID-INSENSITIVE 5 affects seed germination and seedling development in Arabidopsis. J Exp Bot . 2026 Feb 6:erag006. doi: 10.1093/jxb/erag006. Gradzka et al.(2025). CHIP-seq and transcriptomics reveal a new role of circadian-regulated StBBX24 protein in potato reproduction. BMC Plant Biol. 2025 Dec 2;25(1):1702.doi: 10.1186/s12870-025-07811-0. Chen et al. (2025). Short heat shock factor A2 regulates heat resistance and growth balance in Arabidopsis. Elife. 2025 Nov 3:13:RP99937. doi: 10.7554/eLife.99937. Mohapatra et al. (2025). An Improved Method for Isolating Intact Chloroplasts from Different Plant Species. Journal of Plant Growth Regulation, doi.org/10.1007/s00344-025-11911-4. Fal et al. (2025). CRISPR/dCas9-targeted H3K27me3 demethylation at the CUC3 boundary gene triggers ectopic transcription and impacts plant development. iScience . 2025 Apr 21;28(5):112475. doi: 10.1016/j.isci.2025.112475. Supriya et al. (2025). Melatonin Bridges Timekeeping and Survival: Coordinating Diurnal Rhythms, Autophagy, and Energy Balance in Upland Cotton. Plant Stress, 100969. Boussardon et al. (2025). The atypical proteome of mitochondria from mature pollen grains. Curr Biol . 2025 Jan 21:S0960-9822(24)01705-6. doi: 10.1016/j.cub.2024.12.037. Martín-Merchán et al. (2024). Arabidopsis AGO1 N-terminal extension acts as an essential hub for PRMT5 interaction and post-translational modifications. Nucleic Acids Res . 2024 May 20:gkae387.doi: 10.1093/nar/gkae387. Mosesso et al. (2024). Arabidopsis CaLB1 undergoes phase separation with the ESCRT protein ALIX and modulates autophagosome maturation. Nat Commun. 2024 Jun 19;15(1):5188. doi: 10.1038/s41467-024-49485-6. Nguyen et al.(2024). The processed C-terminus of AvrRps4 effector suppresses plant immunity via targeting multiple

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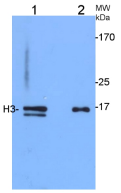
WRKYs.J Integr Plant Biol. 2024 Jun 13.doi: 10.1111/jipb.13710.



1.2 µg of *Arabidopsis thaliana* chromatin-enriched fraction (1) and 3.75 µg of total protein from 4-weeks-old *Arabidopsis thaliana* leaves (2), and were separated on 12% SDS-PAGE and blotted 50 mins to Immobilon-P (Millipore, semi-dry) PVDF membrane. Blots were blocked immediately following transfer in MTBS-T (5% milk) for 30 mins at room temperature with agitation. Blots were incubated in the primary antibody at a dilution of 1:5000 for 1h at room temperature with agitation. The antibody solution was decanted and the blot was rinsed briefly twice, then washed 3 times for 3 min in TBS-T at room temperature with agitation. Blots were incubated in secondary antibody (anti- IgG horse radish peroxidase conjugated, from Agrisera, AS09 602) diluted to 1:20 000 for 30 mins at room temperature with agitation. The blots were washed as above and developed for 5 min with ECL detection reagent according to the manufacturers instructions. Exposure time was 30 seconds. Double band in chromatine-enriched fraction (1) has been outcompeted in peptide neutralization assay by peptide used to elicit H3 antibodies. Chromatin izolation was carried out as described (Zilberman et al. 2008) with minor modifications.

Courtesy of Weronika Sura and Dr. Piotr A. Ziolkowski, Department of Biotechnology, Adam Mickiewicz University, Poznan, Poland

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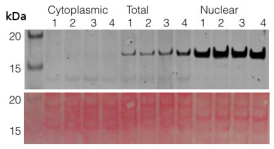

30 µg of 5 µl of *Chlamydomonas reinhardtii* protein saturated in 8M urea were separated on 15% SDS-PAGE and blotted for 1hour to 0.2 µm nitrocellulose at 100V using wet transfer system. Blots were blocked with 0.5% cold fish gelatin for 1hr at room temp with agitation. Blot was incubated in the primary antibody (anti-H3) at a dilution of 1:2500 for an hour at RT with agitation. The blots were washed with 3X 15min TBS-TT at RT with agitation. Blots as incubated in the secondary antibody (DayLight 800) 1:5000 dilution for 30min at RT with agitation and washed 1X with TBSTT for 15min, 1X with TBST for 15min before scanning with the ODyssey IRD scanner.

Courtesy of Dr. Betty Chung, University of Cambridge, United Kingdom

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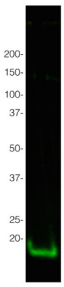

5 µl of 15µg/µl *Solanum lycopersicum* protein saturated in 8M urea were separated on 15% SDS-PAGE and blotted for 1hour to 0.2 µm nitrocellulose at 100V using wet transfer system. Blots were blocked with 0.5% cold fish gelatin for 1hr at room temp with agitation. Blot was incubated in the primary antibody (anti-H3) at a dilution of 1:2500 for an hour at RT with agitation. The blots were washed with 3X 15min TBS-TT at RT with agitation. Blots as incubated in the secondary antibody, fluorescent antibody (AS12 2460, Agrisera) 1:5000 dilution for 30min at RT with agitation and washed 1X with TBSTT for 15min, 1X with TBST for 15min before scanning with the ODyssey IRD scanner.

Courtesy of Dr. Betty Chung and Dr Zhengming Wang, University of Cambridge, United Kingdom

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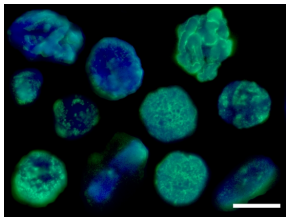

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Immunocytochemical assays were performed according to the method described earlier (Rybaczek and Maszewski 2006). Excised apical parts of *Vicia faba* roots (1.5 mm long) were fixed for 45 min (18°C) in PBS-buffered 3.7% paraformaldehyde, washed several times with PBS and placed in a citric acid-buffered digestion solution (pH 5.0; 37°C for 45 min) containing 2.5% pectinase (Fluka), 2.5% cellulase (Onozuka R-10; Serva) and 2.5% pectoliase (ICN). After removing the digestion solution, root tips were washed 3 times in PBS, rinsed with distilled water and squashed onto Super Frost Plus glass slides (Menzel-Gläser). Air-dried slides were pretreated with PBS-buffered 5% BSA at 20°C for 50 min and incubated overnight in a humidified atmosphere (4°C) with rabbit antibody raised against H3 histone (Agrisera), dissolved in PBS containing 1% BSA (at a dilution of 1:50). Following incubation, slides were washed 3 times with PBS and incubated for 1 h (18°C) with Agrisera secondary goat anti-rabbit IgG DyLight®488 antibody (AS09 633, 1:1000). Nuclear DNA was stained with 4',6-diamidino-2-phenyl-indole (DAPI, 0.4 µg/ml; Sigma-Aldrich). Following washing with PBS, slides were air dried and embedded in Vectashield Mounting Media for Fluorescence (Vector Laboratories). Observations were made using Optiphot-2 fluorescence microscope (Nikon) equipped with B-2A filter (blue light; 495 nm) for DyLight-conjugated antibodies and UV-2A filter (UV light; 365 nm) for DAPI. All images were recorded at exactly the same time of integration using DXM 1200 CCD camera.

Courtesy Dr. Dorota Rybaczek, Łódź University, Poland