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Product no AS11 1801

H1 | Histone H1

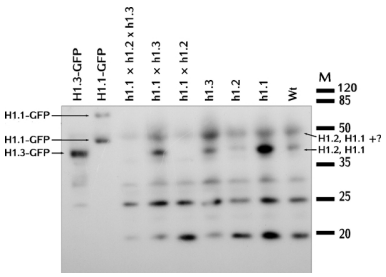
Product information

Immunogen	native H1 protein purified from *Nicotiana tabaccum* (H1A, H1B H1C,D,E,F)
Host	Rabbit
Clonality	Polyclonal
Purity	Immunogen affinity purified serum in PBS pH 7.4.
Format	Lyophilized
Quantity	50 µg
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.

Application information

Recommended dilution	1 : 100-1 : 500 (ICC), 1 : 5000 (WB)
Expected | apparent MW	15 | 17 kDa
Confirmed reactivity	*Arabidopsis thaliana, Nicotiana tabacum, Triticum aestivum*
Predicted reactivity	*Lathyrus sativus, Phaseolus vulgaris, Pisum sativum, Solanum lycopersicum, Vicia faba* Species of your interest not listed? Contact us
Not reactive in	No confirmed exceptions from predicted reactivity are currently known
Selected references	Rutowicz et al. (2019). Linker histones are fine-scale chromatin architects modulating developmental decisions in Arabidopsis. Genome Biol. 2019 Aug 7;20(1):157. doi: 10.1186/s13059-019-1767-3. (western blot, immunolocalization) Benoit et al. (2018). Replication-coupled histone H3.1 deposition determines nucleosome composition and heterochromatin dynamics during Arabidopsis seedling development. New Phytol. 2018 Jun 13. doi: 10.1111/nph.15248. Wollmann et al. (2017). The histone H3 variant H3.3 regulates gene body DNA methylation in Arabidopsis thaliana. Genome Biol. 2017 May 18;18(1):94. doi: 10.1186/s13059-017-1221-3. She and Baroux (2015). Chromatin dynamics in Pollen Mother Cells underpin a common scenario at the somatic-to-reproductive fate transition of both the male and female lineages in Arabidopsis. Front. Plant Sci. | doi: 10.3389/fpls.2015.00294. She et al. (2013). Chromatin reprogramming during the somatic to-reproductive cell fate transition in plants. Development Oct;140(19):4008-19. doi: 10.1242/dev.095034. Epub 2013 Sep 4. (Arabidopsis thaliana, immunostaining)

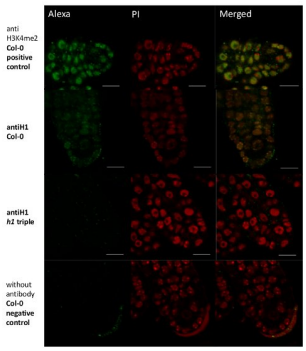
Western blot



50 µl of a total protein from *Arabidopsis thaliana* leafs (wt and single, double and triple H1 mutants as well as overexpressed H1 as a GFP fusion) extracted in a following way: samples were grinded in LN2, suspended in 1xSDS buffer (sample:buffer 1:5), sonicated (10 min., max. power, in ice-cooled sonicating bath (BioRuptor, Diagenode, Belgium) and were separated on 15 % SDS-PAGE and blotted 2h to PVDF(Millipore Westran). Blots were blocked with 5 % non-fat milk TBST for 1h at room temperature (RT) with agitation. Blot was incubated in the primary antibody at a dilution of 1: 5 000 for over night at 4°C with agitation. The antibody solution was decanted and the blot was rinsed and washed four times for 10 min in TBS-T at RT with agitation in 2.5 % non-fat milk in YBST. Blot was incubated in secondary antibody (anti-rabbit IgG horse radish peroxidase conjugated,from Agrisera, AS09 602) diluted to 1:10 000 in for 1h at RT with agitation. The blot was washed as above and developed for 5 min with a home made ECL. Exposure time was 5 min.

Courtesy of Dr. Maciej Kotliński, Institute of Biochemistry and Biophysics of Polish Academy of Sciences in Warsaw, Poland

Immunolocalization



Whole-mount immunostaining on *Arabidopsis thaliana* ovule primordia stage 2-II. Steps involved: **clarification** (methanol/xylene), **cell wall digestion** and **permeabilization** before application of the primary, then secondary antibody for 12-14 hours at 4°C; **fixation**: BVO buffer: buffer from (Bauwens and Van Oostveld 1996), 2mM EGTA pH7.5, 10% DMSO, 1% Tween in PBS (containg 1% formaldehyde) for 30 min. rotating/shaking plate RT; **blocking:** none; **counterstaining:** propidium iodide and mounted in Prolong Gold (Invitrogen); **primary antibody dilution:** 1:200 in PBS + 0.2% Tween-20; **secondary antibody dilution:** 1:200 at 4°C, 24h, goat anti-rabbit IgG Alexa 488 conjugated (Molecular Probes (A11008)).

H1 immunostaining in *Arabidopsis thaliana* ovule primordia stage 2-II is in accordance with H1.1-GFP expression pattern (She et al 2013 et al. 2013).

Courtesy of Dr. Kinga Rutowicz, IBB PAS, Warsaw, Poland, with the technical assistance of Drs. Wenjing She and Célia Baroux, University of Zürich, Switzerland.