

product **AS07 207**
PR-3 | CHN | class I chitinase

product information

background	Pathogenesis-related (PR) proteins, are induced in response to the infection of plants with microbial pathogens. Combinations of glucanase I and chitinase I are potent inhibitors of fungal growth in vitro however precise mechanism of that is still not known. Glucanase I (PR-2) and chitinase I (PR-3) contribute to defense against fungal infection and are currently used as markers for innate immunity, and in particular the ethylene/jasmonate signalling pathway in pathogenesis.
immunogen	purified tobacco class I chitinase. The preparation used is a mixture of two class I isoforms (Shinshi et al., 1990; van Buuren et al., 1992): 1) Chitinase A (CHN A) P08252 encoded by gene <i>chn48</i> derived from the <i>N. tomentosiformis</i> ancestor of tobacco. 2) Chitinase B (CHN B) P24091 encoded by gene <i>chn50</i> derived from the <i>N. sylvestris</i> ancestor of tobacco.
antibody format	rabbit polyclonal total IgG in PBS pH 7.4 lyophilized
quantity	2 mg for reconstitution add 100 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 tubes briefly prior to opening them to avoid any losses that might occur from lyophilized material adhering to the cap or sides of the tubes.
tested applications	western blot (WB)
additional information	antibody is recognizing closely related tobacco class I isoforms: endochitinase A CHN-A (ca. 34 kDa) and endochitinase B CHN-B (ca. 32 kDa) This antibody can be used as a marker of vacuolar contents Keefe et al. (1990) . The effect of ethylene on the cell-type-specific and intracellular localization of -1,3-glucanase and chitinase in tobacco leave. Plant 182: 43-51.

application information

recommended dilution	8 µg/ml with standard ECL (WB)
expected apparent MW	35, 34 32 and 34 kDa
confirmed reactivity	<i>Nicotiana tabacum</i>
predicted reactivity	dicots including: <i>Arabidopsis thaliana</i> , <i>Solanum tuberosum</i> , <i>Vitis vinifera</i> , monocots including: <i>Zea mays</i>
not reactive in	no confirmed exceptions from predicted reactivity known in the moment
additional information	Important note: For blocking 5 % skim milk in PBS without Ca ⁺⁺ should be used.

This antibody is purified by affinity chromatography on Protein G.

selected references

[Sticher et al. \(1993\)](#). Posttranslational processing of a new class of hydroxyproline-containing proteins: Prolyl hydroxylation and C-terminal cleavage of tobacco (*Nicotiana tabacum*) vacuolar chitinase. *Plant Physiol.* 101, 1239-1247.

application example

Detection of tobacco chitinase I in ng loaded per respective well using anti-tobacco chitinase I antibodies. Primary antibodies have been used at 8 µg/ml.

