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 chn48 derived from the *N. tomentosiformis* ancestor of tobacco. 2) Chitinase B (CHN B) P24091 encoded by gene chn50 derived from the *N. sylvestris* ancestor of tobacco.

**Host**
Rabbit

**Clonality**
Polyclonal

**Purity**
Total IgG

**Format**
Lyophilized in PBS pH 7.4

**Quantity**
2 mg

**Reconstitution**
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**
Co-Immunoprecipitation (IP) (Co-IP), Immunolocalization (IL), Western blot (WB)

**Related products**
- **AS10 687** | Anti-PR-1 | Pathogenesis-related protein 1, rabbit antibodies
- **AS12 2366** | Anti-PR-2 | pathogenesis-related protein 2, rabbit antibodies for *Arabidopsis thaliana*
- **AS07 208** | Anti-PR-2 | GLU-I | class I beta-1,3-glucanase, rabbit antibodies for other species, not *Arabidopsis thaliana*
- **AS12 2369** | PR-4 | Pathogenesis-related protein 4, rabbit antibodies
- **AS12 2373** | PR-5 | Pathogenesis-related protein 5, rabbit antibodies

- collection of antibodies to other proteins involved in a response to pathogen attack

**Secondary antibodies**

**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 (WB)

**Expected apparent MW**
35, 34 & 32 and 34 kDa

**Confirmed reactivity**
*Agostis stolonifera* cv. ‘Penncross’, *Capsicum annuum*, *Nicotiana tabacum*, *Picea abies*, *Solanum esculentum*, *Solanum lycopersicum*, *Solanum tuberosum*, *Vitis vinifera*

**Predicted reactivity**
*Arabidopsis thaliana*, *Zea mays*
Not reactive in

No confirmed exceptions from predicted reactivity are currently known.

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

- Anil Kumar et al. (2016). Beyond just being foot soldiers – osmotin like protein (OLP) and chitinase (Chi11) genes act as sentinels to confront salt, drought, and fungal stress tolerance in tomato. Environmental and Experimental Botany 132 (2016) 53–65

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.