**Agrisera**

*This product is for research use only (not for diagnostic or therapeutic use)*

**product AS06 180**

**cAPX | Ascorbate peroxidase (cytosolic)**

**product information**

**Background**

Ascorbate peroxidase (APX) is the enzyme catalyzing the ascorbate-dependent reduction of hydrogen peroxide. Ascorbate (AA) plays a key role in defense against oxidative stress and is particularly abundant in fruits and photosynthetic tissues. AA is found in every compartment of the plant cell including the apoplast.

**Immunogen**

KLH-conjugated peptide derived from N-terminal of *Zea mays* cytosolic APX UniProt: Q41772

**Host**

Rabbit

**Clonality**

Polyclonal

**Purity**

Total IgG

**Format**

Lyophilized in PBS pH 7.4

**Quantity**

200 µl

**Reconstitution**

For reconstitution add 200 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**

Immunoprecipitation (IP), Immunolocalization (IL), Western blot (WB)

**Related products**

AS06 184 | Anti-AO | apoplastic ascorbate oxidase, rabbit antibodies

AS09 384 | Anti-AO | ascorbate oxidase, rabbit antibodies

AS09 383 | Anti-AO | ascorbate oxidase, biotinylated rabbit antibodies

AS08 368 | Anti-APX | ascorbate peroxidase, rabbit antibodies

Plant protein extraction buffer

Secondary antibodies

**Additional information**

Total IgG concentration is 3 µg/µl.

**Application information**

**Recommended dilution**

2 µg (IP), 1 : 500 (IL), 1 : 2000 - 1 : 10 000 (WB)

**Expected | apparent MW**

28 kDa

**Confirmed reactivity**

*Arabidopsis thaliana, A. toxicaria, Dunaliella salina, Hordeum vulgare, Nicotiana tabacum, Oryza sativa, Pismum sativum, Salicornia sp., Silene vulgaris, Solanum lycopersicum, Solanum lycopersicum, Solanum tuberosum, Picea silvestris, Zea mays, Zygophyllum labaceus*

**Predicted reactivity**

*Brassica, juncea, Citrus sinensis, Fragaria ananassa, Gossypium hirsutum, Solanum tuberosum, Sorghum bicolor, Pinus pinaster, Vitis vinifera*

**Not reactive in**

*Glycine max*

**Selected references**


Application example

40 µg of total protein from *Solanum lycopersicum* extracted with Extraction buffer (1x Hepes buffer, cComplete Mini protease inhibitor cocktail (1 tablet/10ml), 5mM DTT) and denatured with 1x SDS-loading buffer at 95°C for 5 min. Samples were separated on 12 % SDS-PAGE and blotted 1h to PVDF using dry transfer. Blots were blocked with 5% milk in TBST for 45 min with agitation. Blot was then washed once with TBST, and then incubated in the primary antibody a-cAPX at a dilution of 1:2000 ON/4°C with agitation. The antibody solution was decanted and the blot was rinsed briefly twice, then washed once for 3 times for 5 min in TBS-T at RT with agitation. Blot was incubated in Agrisera matching secondary antibody (anti-rabbit IgG horse radish peroxidase conjugated, AS09 602) diluted to 1:5000 in for 30min/RT with agitation. The blot was washed as above and developed for 2 min with chemiluminescence detection reagent. Exposure time was set to automatic.

Courtesy Dr. Nuria Sanchez Coll, CRAG, Spain

20 µg of total protein from *Arabidopsis thaliana* total (1), soluble (2) and membrane (3) fractions were prepared according to Planas-Marquès et al. (2016) and denatured with 1x SDS-loading buffer at 95°C for 5 min. Samples were separated on 12 % SDS-PAGE and blotted 1h to PVDF using dry transfer. Blots were blocked with 12 % milk in TBST for 45 min with agitation. Blot was then washed once with TBST, and then incubated in the primary antibody a-cAPX at a dilution of 1:10 000 ON/4°C with agitation. The antibody solution was decanted and the blot was rinsed briefly twice, then washed once for 3 times for 5 min in TBS-T at RT with agitation. Blot was incubated in Agrisera matching secondary antibody (anti-rabbit IgG horse radish peroxidase conjugated, AS09 602) diluted to 1:5000 in for 30min/RT with agitation. The blot was washed as above and developed with chemiluminescent detection reagent. Exposure time was set to automatic.

Courtesy Dr. Nuria Sanchez Coll, CRAG, Spain
(A), (B): control antibody, anti-PIN1, (C,D) immunolocalization using anti-cAPX antibodies.

Courtesy of Dr. Taras Pasternak; Freiburg University, Germany

Dissociated rat hippocampal neurons 14 DIV Transfection of FLAG- and Nuclear Export Signal-tagged APEX2 (variant of cAPX; FLAG-APEX2-NES). Fixation: 4% formaldehyde for 15 min RT, 0.1% TritonX-100 permeabilization 20 min RT, 5% FCS blocking 1 hr RT. All in PBS. Primary antibody: 1:200 rabbit anti-cAPX, 4°C incubated for 24h, 1:1000 mouse anti-FLAG, RT 1h. Secondary antibodies: 1:1000 anti-rabbit Alexa488, RT 1 h, 1:1000 anti-mouse Alexa561, RT 1 h.

Courtesy of Dr. Tony Cijouw, Biederer lab, Department of Neuroscience Tufts University School of Medicine, USA