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Product no AS08 368

APX | L-ascorbate peroxidase

Product information

Background **APX** plays a key role in plant antioxidant system by reducing hydrogen peroxide to water. Cellular localization includes chloroplast (tAPX and sAPX), cytosol (cAPX) and peroxisome (pAPX).

Immunogen BSA-conjugated synthetic peptide derived from *Arabidopsis thaliana* tAPX (thylakoidal ascorbate peroxidase) UniProt: Q42593-1, TAIR:At1g77490 and sAPX (stromal/mitochondrial ascorbate peroxidase) UniProt: Q42592-1 TAIR: At4g08390

Five out of twelve amino acids are also identical with cAPX1 (At1g07890), cPX2 (At3g09640) and pAPX (At4g35000)

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 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)

Related products AS06 180 | Anti-cAPX, rabbit antibodies

Application information

Recommended dilution 1 : 2000 (WB)

Expected | apparent MW 25-38 kDa for *A. thaliana*

Confirmed reactivity *Arabidopsis thaliana, Armeria maritima, Brassica* sp.*, Capsicum annuum, Citrus* sp.*, Digitaria sanguinalis, Echinochla crus-galli, Iris pumila, Lathyrus sativus, Liquidambar formosana, Manihot esculenta, Medicago sativa, Nicotiana tabacum* thylakoid-bound APX, strom*al APX; Oryza sativa, Panicum milaceum, Plumbago zeylanica, Schima superba, Silene vulgaris, Solanum lycopersicum, Spinacia oleracea* (stromal APX, thylakoid-bound), *Triticum aestivum*

Predicted reactivity *Brassica rapa subsp. oleifera* Stromal APX; *Glycine max, Glycine soja* L-ascorbate peroxidase T, chloroplastic; *Medicago truncatula* thylakoid-bound APX; *Mesembryanthemum crystallinum, Pisum sativum* Chloroplast stromal ascorbate peroxidase 12; *Solanum lycopersicum* thylakoid-bound APX; *Spinacia oleracea* stromal APX; *Theobroma cacao* L-APX T isoform 3; *Vitis vinifera*

Species of your interest not listed? Contact us

Not reactive in Algae, *Helianthus annus*

Additional information This product can be sold containing proclin if requested

For high resolution images, please visit the specific product page at www.agrisera.com

Selected references

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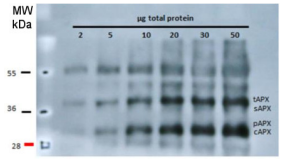
Application example

5 to 20 µg of total leaf protein from Arabidopsis thaliana (left panel) and chloroplast fractions (thylakoids and soluble, right panel) was separated on **15% polyacrylamide gel with 6M urea** and blotted on **PVDF**. Filters were blocked 1h with 5% **BSA**, incubated with anti-APX antibody (**1: 2000**, 1h) followed by incubation with secondary HRP-coupled anti rabbit antibody (**1: 10 000**, 1h). Signal was detected with chemiluminescence detection reagent. AS08 368 is reactive to thylakoid (tAPX, 38 kDa), stromal (sAPX, 33 kDa), peroxisomal (pAPX, 31 kDa) and cytoplasmic (cAPX1 + cAPX2, 25 kDa) forms of ascorbate peroxidases.



Total proteins of *Arabidopsis thaliana* leaves were extracted with 10 % TCA and precipitated. The pellet was washed with acetone and resuspended in 100mM Tris-HCl (pH 7.5), 1mM EDTA, 2% (w= v) SDS, 1:100 of protease inhibitor cocktail (Thermo Scientific), 1 mM PMSF. Leaves were also grinded in 100 mM Tris-HCl (pH 7.5), MgCl2 10 mM, 1 mM EDTA, 1 mM PMSF, 1/100 of protease inhibitor cocktail and centrifugated. The supernatant (soluble fraction) was separated and the pellet (membrane fraction) was resuspended in the same buffer with 6 M urea and 1% SDS. Different amounts of proteins were separated in 15 % polyacrylamide gel with 6M urea after denaturation (70°C 5 min) and blotted on PVDF. Filters were blocked 1h with 5% BSA, Incubated with anti-APX antibodies at a dilution 1:2000, 1h/RT, washed 4 times with TBS tween (5 min each) and incubated with HRP coupled anti-rabbit IgG secondary antibody in dilution 1:10 000 1h/RT (AS09 602, Agrisera). After incubation with secondary antibody, the filter was washed 4 times with TBS (5 min each) and signal was detected with chemiluminescent detection reagent (30 secs exposition in film).

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Courtesy Manuel Guinea Diaz, University of Turku, Finland