

product **AS08 368**

**APX | L-ascorbate peroxidase**

### product information

<b>background</b>	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).
<b>immunogen</b>	synthetic peptide derived from <i>Arabidopsis thaliana</i> tAPX (accession <a href="#">At1g77490</a> ) and sAPX ( <a href="#">At4g08390</a> ) protein sequences, coupled to BSA. Five out of twelve amino acids are also identical with cAPX1 ( <a href="#">At1g07890</a> ), cPX2 ( <a href="#">At3g09640</a> ) and pAPX ( <a href="#">At4g35000</a> )
<b>antibody format</b>	rabbit; polyclonal; serum; lyophilized
<b>quantity</b>	200 µl - for reconstitution add 200 µl of sterile water
<b>storage</b>	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.
<b>tested applications</b>	Western blot (WB)
<b>additional information</b>	to be added when available

### application information

<b>recommended dilution</b>	1: 2000 with standard ECL (WB)
<b>expected   apparent MW</b>	25-38 kDa for <i>A. thaliana</i>
<b>confirmed reactivity</b>	<i>Arabidopsis thaliana</i> , <i>N. tabacum</i> thylakoid-bound APX, stromal APX; <i>Silene vulgaris</i>
<b>predicted reactivity</b>	<i>O. sativa</i> probable L-ascorbate peroxidase 6 chloroplastic; <i>S. lycopersicum</i> thylakoid-bound APX; <i>S. oleracea</i> stromal APX, thylakoid-bound
<b>not reactive in</b>	no confirmed exceptions from predicted reactivity known in the moment
<b>additional information</b>	to be added when available
<b>selected references</b>	<a href="#">Kangasjärvi</a> et al. (2008) Diverse roles for chloroplast stromal and thylakoid-bound ascorbate peroxidases in plant stress responses. <i>Biochem J</i> ; 412(2): 275-285. <a href="#">Hideg</a> et al. (2008) Imaging of NPQ and ROS formation in tobacco leaves: heat inactivation of the water-water cycle prevents down-regulation of PSII. <i>Plant Cell Physiol</i> . 49(12): 1879-86.

## 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 standard ECL. 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.

