

product **AS10 652**
Cu/ZnSOD | Cu/Zn superoxide dismutase

product information

background	Antioxidant system works as a defense against oxidative stress. SOD (superoxide dismutase) catalyzes the dismutation of superoxide into oxygen and H ₂ O ₂ . SODs are classified, according to their metal cofactor, as FeSOD, MnSOD, or Cu / ZnSOD. Chloroplasts generally contain Cu/ZnSOD and, in a number of plant species, FeSOD
immunogen	15 amino acids synthetic peptide designed from olive pollen cytosolic Cu/Zn cDNA consensus sequences (GenBank Accessions EU250757 to EU250797), UniProt Q8L5E0
antibody format	hen polyclonal total IgY in 10mM Tris, 150 mM NaCl, 0.02% sodium azide liquid
quantity	200 µl
storage	store at -4°C. 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	Total IgY concentration is 2.3 mg/ml Reaction of the antibody to chloroplastic SOD isoform has not been determined yet

application information

recommended dilution	1 : 1500 with Alexa 488 (WB)
expected apparent MW	15.3 16 kDa (<i>Olea europaea</i> L.)
confirmed reactivity	<i>Arabidopsis thaliana</i> (leaves), <i>Olea europaea</i> (pollen), <i>Spinacia oleracea</i> (leaves)
predicted reactivity	dicots including: <i>Ananas ananas</i> , <i>Helianthus sp.</i> , <i>Plantago major</i> , <i>Solidago sp.</i> trees: <i>Betula pendula</i>
not reactive in	<i>Nicotiana tabacum</i>
additional information	Note: Antibody recognizes two to three isoforms of Cu/Zn SOD in olive pollen depending on the olive cultivar.
selected references	Alché, J.D., Corpas, F.J., Rodríguez-García, M.I. and del Río, L.A.: "Identification and immunolocalization of superoxide dismutase isoenzymes of olive pollen". <i>Physiol. Plantarum</i> 104, 772-776. 1998.

application example

25 µg of total protein from *Olea europaea* pollen were separated on 12% acrylamide gels and blotted onto PVDF. Membranes were blocked 1h with 2% low-fat milk powder in TBS-T (0.1% TWEEN 20) and probed with anti-Cu/Zn SOD (AS10 652, 1:1500, overnight, 4° C) and secondary antibody anti-chicken IgG conjugated to Alexa 488 (1:2000, 1 h) (Molecular Probes, Invitrogen). Signal was detected with a PharosSX fluorescence scanner (Bio-Rad).

The antibody recognizes a protein of c.a. 16 kDa. and another band likely corresponding to the protein dimer.

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