

product **AS06 122**

CRD1 | cyanobacterial homolog of plant CHL27 cyclase

product information

background	Chl27 catalyzes the cyclase reaction in chlorophyll biosynthesis.
immunogen	residues 1-409 from <i>Arabidopsis thaliana</i> CHL27 fused to TrxA Q9M591
antibody format	rabbit polyclonal serum lyophilized
quantity	100 µl 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	western blot (WB)
additional information	[compartment marker] of chloroplast thylakoid and envelope membranes

application information

recommended dilution	1:3000 with alkaline phosphatase (WB)
expected apparent MW	47 40 kDa (<i>Arabidopsis thaliana</i>)
confirmed reactivity	<i>Arabidopsis thaliana</i> , <i>Hordeum vulgare</i> , <i>Nicotiana tabacum</i> , <i>Pisum sativum</i> , moss: <i>Physcomitrella patens</i> , <i>Chlamydomonas reinhardtii</i> , purple bacteria (CRD1) and (CHL27)
predicted reactivity	eudictos: <i>Gossyium hirsutum</i> ; <i>Euphorbia esula</i> ; <i>Ricinus communis</i> , monocots <i>Hordeum vulgare</i> , cyanobacteria
not reactive in	no confirmed exceptions from predicted reactivity known in the moment
additional information	Antibodies detect two isoforms in <i>Chlamydomonas reinhardtii</i> , CRD1 in cells grown under copper deficiency (39.8 kDa) and CTH1 in cells grown with sufficient copper (40.7 kDa). Antibodies will also react with <i>Arabidopsis thaliana</i> , <i>Hordeum vulgare</i> , <i>Pisum sativum</i> , and purple bacteria
selected references	Lang , E.G.E., S.J. Mueller, S.N.W. Hoernstein, J. Porankiewicz-Asplund, M. Vervliet-Scheebaum, R. Reski (2010). Simultaneous isolation of pure and intact chloroplasts and mitochondria from moss as basis for sub-cellular proteomics. Plant Cell Reports, DOI: 10.1007/s00299-010-0935-4. (open source). Peter et al. (2010). Mg protoporphyrin monomethylester cyclase deficiency and effects on tetrapyrrole metabolism in different light conditions. Plant Cell Physiol. 51(7):1229-1241. Moseley et al. (2002) Reciprocal expression of two candidate di-iron enzymes affecting photosystem I and light-harvesting complex

accumulation. Plant Cell 14:673-688. [Totter](#) et al. (2003) Arabidopsis CHL27, located in both envelope and thylakoid membranes, is required for the synthesis of protochlorophyllide. Proc. Natl. Acad. Sci. USA 100:16119-16124.