

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

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Product no **AS23 4889**

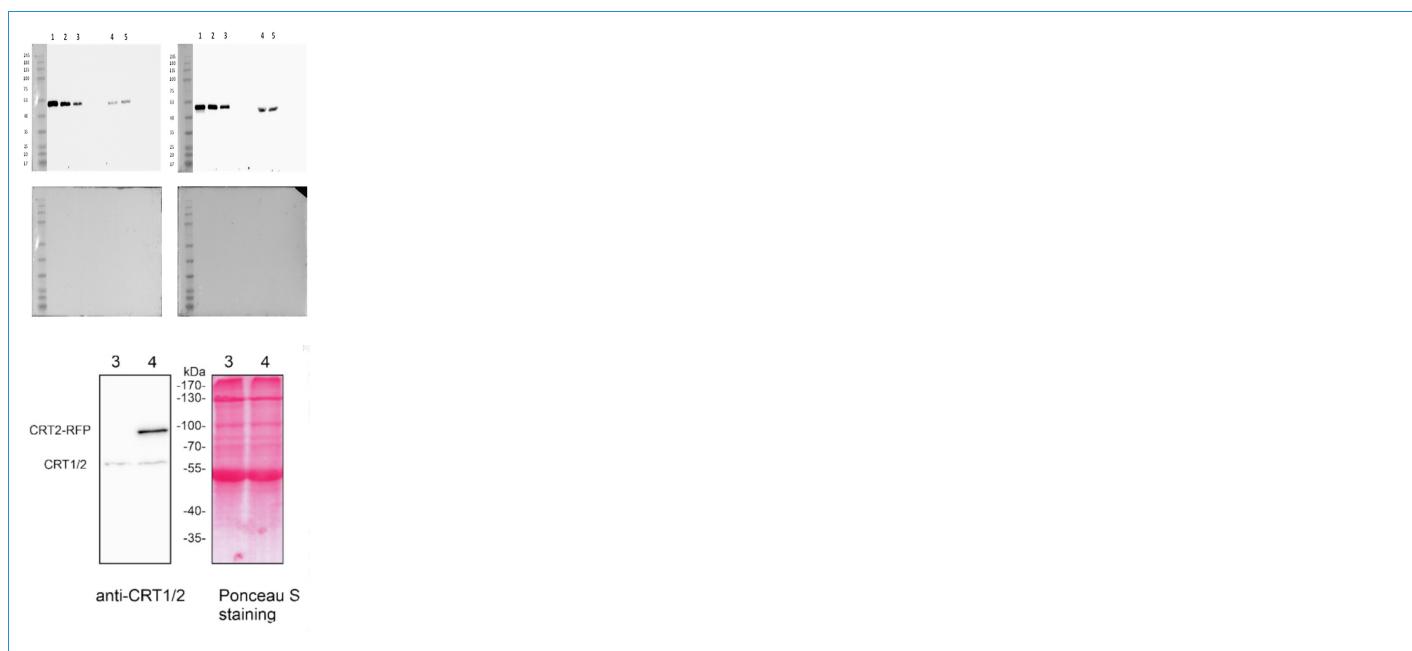
Anti-CRT1/2 | Calreticulin-1/2

Product information

Immunogen	KLH-conjugated peptide derived from <i>Arabidopsis thaliana</i> CRT1: UniProt: Q04151 TAIR: AT1G09210 and CRT2, UniProt: Q38858 TAIR: At1g56340
Host	Rabbit
Clonality	Polyclonal
Purity	Antigen affinity purified serum, in PBS pH 7.4
Format	Lyophilized
Quantity	50 µg
Reconstitution	For reconstitution add 50µl of sterile or deionized 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.
Additional information	This antibody can be used as a marker of plant endoplasmic reticulum (ER)

Application information

Recommended dilution	1 : 1000 (WB)
Expected apparent MW	46 53 kDa for CRT1, depending upon the signal peptide cleavage and N-glycosylation 46 50 kDa for CRT2, depending upon the signal peptide cleavage and N-glycosylation
Confirmed reactivity	<i>Arabidopsis thaliana</i> , <i>Petunia hybrida</i>
Predicted reactivity	<i>Brassica napus</i> , <i>Solanum lycopersicum</i> , <i>Solanum tuberosum</i> , <i>Nicotiana tabacum</i> Species of your interest not listed? Contact us
Not reactive in	No confirmed exceptions from predicted reactivity are currently known
Additional information	Apparent MW of CRT is slightly higher than expected, due to <i>Arabidopsis</i> CRTs being N-glycosylated. According to Jin et al. 2009 , CRT1 and CRT2 are both expressed in seedlings and can be distinguished as 2 separate bands by their migration upon SDS-PAGE and immunoblotting with CRT1 having a higher MW than CRT2. The data with infiltrated <i>N. benthamiana</i> show that CRT2 is recognized by anti-CRT1/CRT2. Presumably, the band in <i>A. thaliana</i> Col-0 wild-type is therefore also CRT2 and CRT1 is not or weakly recognized. The CRT1/CRT2 antibody does not react with <i>Arabidopsis</i> CRT3 expressed in <i>N. benthamiana</i> (not shown)
Selected references	To be added when available, antibody available in August 2025.



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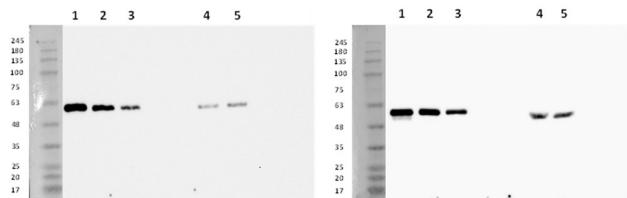
Samples:

- 1 – 50 µg of *Arabidopsis thaliana* Col-0 wild type seedling extract
- 2 – 50 µg of *Arabidopsis thaliana* crt1 crt2 mutant seedling extract

- 3 – 50 µg of *Nicotiana benthamiana* leaf extract (mock infiltrated with empty vector control)
- 4 – 50 µg of *Nicotiana benthamiana* leaf extract transiently expressing *A. thaliana* CRT2-RFP fusion protein

50 µg/well of total protein extracted freshly from *A. thaliana* seedlings. Exact buffer components were: 1 x PBS supplemented with 1 % (v/v) Triton X-100 and denatured with Laemmli buffer at 95 °C for 5 min. Samples were separated at room temperature by 10 % SDS-PAGE and blotted for 1 h to a nitrocellulose membrane (pore size of 0.45 µm), using wet transfer with a cooling block. The blot was blocked with 5 % (w/v) milk in TBS-T for 1 h/RT with agitation. The blot was incubated in the primary CRT1/2 antibody at a dilution of 1:1000 in TBS-T overnight at 4 °C with agitation. The antibody solution was decanted and the blot was rinsed briefly twice, then washed once for 15 min and 3 times for 5 min in TBS-T at RT with agitation. The blot was incubated in matching secondary antibody (anti-rabbit IgG horse radish peroxidase conjugated) diluted to 1:30000 in TBS-T for 2h/RT with agitation. The blot was washed as above and developed with the following chemiluminescent detection reagent: AgriseraBright. Exposure time was 20 seconds (Fusion FX, Vilber).

Courtesy Dr. Richard Strasser, Department of Applied Genetics and Cell Biology, BOKU, Austria



Samples:

- 1 – 20 µg *Petunia hybrida* anthers extract (microspores stadium)
- 2 – 20 µg *Petunia hybrida* unpollinated pistil extract
- 3 – 20 µg *Petunia hybrida* pollinated pistil extract (24h after pollination)
- 4 – 20 µg *Petunia hybrida* pollen tubes extract
- 5 – 20 µg *Petunia hybrida* pollen tubes extract

20 µg/well of total protein extracted freshly from *Petunia hybrida* (anthers, pistils and pollen tubes). Exact buffer components were: 100 mM TRIS-HCl (pH 7.5), 10% sucrose, 5 mM EGTA 5 mM EDTA, 2 mM DTT, completeTMProtease Inhibitor (anthers, pistils) or 50 mM HEPES (pH 7.5), 10% sucrose, 5 mM EGTA 5 mM EDTA, 2 mM DTT, cCompleteTMProtease Inhibitor (pollen tubes). Denaturation with exact buffer components at 95 °C/5 min. Samples were separated in the cold on 10% SDS-PAGE and blotted for 20 min to PVDF (0.45 µm), using: semi-dry transfer (Trans-Blot Turbo system, Bio-Rad). Blot was blocked with 5% milk at 4 °C/ON with agitation. Blot was incubated in the primary antibody at a dilution of 1: 1000 for 1h/RT with agitation in PBS-T. The antibody solution was decanted and the blot was rinsed briefly twice, then washed once for 15 min and 3 times for 5 min in PBS-T at RT with agitation. Blot was incubated in matching secondary antibody (anti-rabbit IgG horse radish peroxidase conjugated) diluted to 1: 125 000 for 1h/RT with agitation. The blot was washed as above and developed with a following chemiluminescent detection reagent. Exposure time was 20 seconds (ChemiDoc Touch System, Bio-Rad).

Courtesy of Dr. Piotr Wasag, Nicolaus Copernicus University in Toruń, Poland