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Agrisera AB | Box 57 | SE-91121 Vännäs | Sweden | +46 (0)935 33 000 | www.agrisera.com

Product no AS17 4114

Anti-Gamma CA | Gamma Carbonic anhydrases

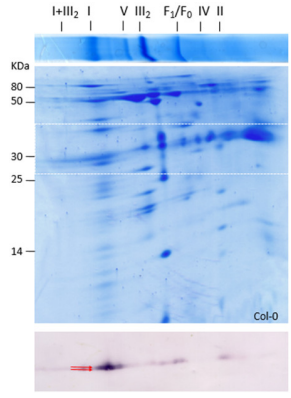
Product information

Immunogen	KLH-conjugated peptide derived from *Arabidopsis thaliana* Gamma-Carbonic anhydrase, UniProt: Q9C6B3, TAIR: AT1G47260
Host	Rabbit
Clonality	Polyclonal
Purity	Serum
Format	Lyophilized
Quantity	50 µl
Reconstitution	For reconstitution add 50 µl of sterile water, Serum contains 0,1 % sodium azide as preservative
Storage	Store lyophilized/reconstituted at -20°C; once reconstituted make aliquots to avoid repeated freeze-thaw cycles. Please remember to spin the tubes briefly prior to opening them to avoid any losses that might occur from material adhering to the cap or sides of the tube.
Additional information	Contains 0,1% ProClin

Application information

Recommended dilution	1 : 1000 (WB)
Expected | apparent MW	9.97 KDa (gamma-CA1), 30KDa (gamma-CA2) strongest band, 27.83 (gamma-CA3), 25.08 KDa *Arabidopsis thaliana* proteins
Confirmed reactivity	*Arabidopsis thaliana, Oryza sativa*
Predicted reactivity	*Arachis duranensis, Brachypodium distachyon, Brassica oleracea, Brassica rapa, Camelina sativa, Capsella rubella, Citrus sinensis, Daucus carota, Erythranthe guttatus, Fragaria vesca subsp. vesca, Gossypium hirsutum, Jatropha curcas, Juglans regia, Lupinus angustifolius, Malus x domestica, Medicago truncatula, Nelumbo nucifera, Oryza brachyantha, Populus euphratica, Prunus mume, Pyrus x bretschneideri, Raphanus sativus, Sesamum indicum, Setaria italica, Solanum tuberosum, Tarenaya hassleriana, Theobroma cacao, Triticum aestivum, Zea mays, Zostera muelleri* Species of your interest not listed? Contact us
Selected references	Chen et al. (2019). Composition of Mitochondrial Complex I during the Critical Node of Seed Aging in Oryza sativa. Journal of Plant Physiology Volume 236, May 2019, Pages 7-14. Kühn et al. (2015). Complete Mitochondrial Complex I Deficiency Induces an Up-Regulation of Respiratory Fluxes That Is Abolished by Traces of Functional Complex I. Plant Physiol. 2015 Aug;168(4):1537-49. doi: 10.1104/pp.15.00589. Epub 2015 Jul 1.

application example



Mitochondrial proteins (1mg) from *Arabidopsis thaliana* ecotype Col-0 cell suspensions were separated by 2D BN/SDS-PAGE (Klodmann et al., 2011; Plant Physiology 157: 587-598). After gel electrophoresis, proteins were transferred to nitrocellulose membrane using semi-dry conditions (90 min; 0.8mA per cm2 of gel). After washing once in TBS-T buffer (10 min), blot was blocked overnight at 4ºC with 10% p/v milk in TBS-T. Blot

was washed three times with 0.5% p/v milk in TBS-T (10 min each) and incubated 1 hour with primary antibody (1:1000 in TBS-T, 3% BSA and 0.02% NaN_3). Washing was carried out three times with TBS-T, 0.5% BSA, 10 min each. Then blot was incubated 1 hour with secondary antibody (Anti-rabbit IgG conjugated to alkaline phosphatase at a dilution of 1:10 000) in TBS-T, 3% BSA, 0.02% NaN_3). After washing (as above), blot was equilibrated 5 minutes in AP buffer (Tris-HCl 1M pH 9.5; 5M NaCl; 4M MgCl2). Finally, revealing was developed by incubation in AP buffer; 110 µg/ml NBT; 75 µg/ml BCiP. Reaction was stopped by discarding revealing solution and adding distilled water. Upper lane: 1D BN gel electrophoresis of mitochondrial proteins, with respective complexes.

Lower gel: second dimension, where mitochondrial proteins of complexes were separated. Blot section (indicated as dashed square in gel) reveals mainly two bands (around 30 kDa- arrows), corresponding to both gamma-CA2 forms. The smear along the 30 kDa line is interpreted as fragments of complex I containing CA2 protein (Perales et al., 2005; Journal of Molecular Biology, 350: 263-277).