COSMO BIO CO., LTD.
Inspiration for Life Science

Agrisera
Antibodies for research

product **AS07 242**

GOGAT | glutamine oxoglutarate aminotransferase

product information

background	**Glutamine oxoglutarate aminotransferase** (abbreviated as GOGAT) is an enzyme involved in synthesis of glutamate from glutamine and alpha-ketoglutarate. GOGAT has two forms in plants: ferredoxin-dependent GOGAT (Fd-GOGAT) and NADH-dependent GOGAT (NADH-GOGAT). 95% of GOGAT found in plants is the Fd-GOGAT type. Fd-GOGAT is encoded by two genes, glu1 and glu2 found on chromosomes 5 and 2 respectively (in Arabidopsis). Fd-GOGAT (both forms) is highly conserved among plants, red algae, and cyanobacteria.
immunogen	KLH-conjugated synthetic peptide well conserved in known GOGAT sequences from different species including *Arabidopsis thaliana* Fd-GOGAT 1 Q9ZNZ7, At5g04140 and Fd-GOGAT 2 Q9T0P4, At2g41220
antibody format	rabbit polyclonal serum lyophilized
quantity	200 µl for reconstitution add 200 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	this antibody can be used as a plastidial marker

application information

recommended dilution	1 : 1000 with standard ECL (WB)
expected | apparent MW	177 | 170-180 kDa depending upon the species
confirmed reactivity	*Arabidopsis thaliana, Miscanthus giganteus, Phaseolus vulgaris, Spartina sp., Zea mays*
predicted reactivity	Burkholderia glumae, Medicago trucutula, Ostreococcus lucimarinus, Leptolyngbya boryana, Porphyra purpurea, Gracilaria tenustipitata, cyanobacteria
not reactive in	no confirmed exceptions from predicted reactivity known in the moment
additional information	A 40 kDa band present in *A. thaliana* sample is not competed away during antibody neutralization assay. In this assay free peptide used for antibody production is incubated together with anti-GOGAT antibodies. Due to the MW of this protein we suggest to use a gradient gel for protein separation and a longer transfer time.

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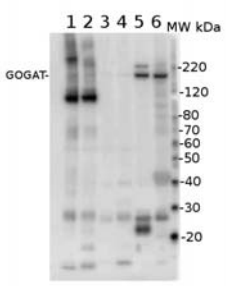
selected references | to be added when available

application example



20 µg of total protein from (**1**) *Spartina patens* total cell extracted with **P**rotein **E**xtration **B**uffer, PEB (**AS08 300**), (**2**) *Spartina alterniflora* total cell, extracted with PEB, (**3**) Miscanthus giganteus total cell extracted with PEB, (**4**) Zea mays total cell extracted with PEB, (**5**) Phaseolus vulgaris total cell extracted with PEB, (**6**) *Arabidopsis thaliana* total cell extracted with PEB, were separated on **4-12%** NuPage (Invitrogen) **LDS-PAGE** and blotted 1h to **PVDF**. Blots were blocked immediately following transfer in 2% ECL Advance blocking reagent (GE Healthcare) in 20 mM Tris, 137 mM sodium chloride pH 7.6 with 0.1% (v/v) Tween-20 (TBS-T) for 1h at room temperature with agitation. Blots were incubated in the primary antibody at a dilution of 1: 10 000 for 1h at room temperature 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 room temperature with agitation. Blots were incubated in secondary antibody (anti-rabbit IgG horse radish peroxidase conjugated, from Abcam) diluted to 1:50 000 in 2% ECL Advance blocking solution for 1h at room temperature with agitation. The blots were washed as above and developed for 5 min with ECL Advance detection reagent according the manufacturers instructions. Images of the blots were obtained using a CCD imager (FluorSMax, Bio-Rad) and Quantity One software (Bio-Rad).

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