GLN1 GLN2 | GS1 GS2 glutamine synthetase global antibody

CD BioSciences
Plant Protein

Cat *PA01222*

Size *50 µl*

Host
Rabbit

Clonality
Polyclonal

Confirmed reactivity
Arabidopsis thaliana, Eragrostis tef, Gracilaria gracilis (red algae), Gracilaria lemaneiformis, Leptodictyum riparium (Hedw.) Warnst (moss), Medicago truncatula, Physcomitrium patens, Pinus strobus, Spinacia oleracea, Solanum lycopersicum, Triticum aestivum, Zea mays

Immunogen
KLH-conjugated synthetic peptide derived from a wide range of available sequences including all isoforms of Arabidopsis thaliana GLN1-1,1-2,1-3 and 1-4, (At5g37600, At1g66200, At3g17820, At5g16570)

Host
Rabbit

Clonality
Polyclonal

Purity
Serum

Format
Lyophilized

Reconstitution
For reconstitution add 50 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 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.

Application
Western blot (WB)

Recommended dilution
1 : 10 000 (WB)

Expected | apparent MW
39-40 kDa (GLN1,cytoplasmic form) , 44-45 kDa (GLN2, chloroplastic form)

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Predicted reactivity
Brachypodium distachyon, Brassica napus, Camellia sinensis, Citrus clementina, Cucumis melo, Daphnia magna, Datisca glomerata, Emiliania huxleyi, Eucalyptus grandis, Gazania splendens, Genlisea aurea, Glycine max,

Address: SUITE 209, 17 Ramsey Road, Shirley, NY 11967
Tel: 1-631-637-0420
E-mail: info@cd-biosci.com
https://www.cd-biosciences.com/plant-protein/

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Helianthus annuus, Hordeum vulgare, Oryza sativa, Panax quinquefolius, Phaseolus angularis, Phytophthora cinnamomi, Populus trichocarpa, Saccharum officinarum, Securigera parviflora, Solanum lycopersicum, Solanum tuberosum, Stevia rebaudiana, Theobroma cacao, Zea mays, Vitis labruscaGLN1 dicots including: Brassica napus, Phaseolus vulgaris, monocots including: Hordeum vulgare, Oryza sativa, trees: Pinus sylvestris, Populus sp., Zosteria marinaGLN2 dicots including: Brassica napus, Glycine max, Phaseolus vulgaris, monocots including: Triticum aestivum, Oryza sativaGLN3: Zea mays,GLN1 in algae: Chlamydomonas reinhardii

Not reactive in

No confirmed exceptions from predicted reactivity are currently known

Additional information

The antibody will recognize both, cytoplasmic and chloroplastic forms of the GS enzyme

Description

Glutamine synthetase (GLN or GS) is one of the key enzymes involved in plant nitrogen metabolism. It catalyzes the synthesis of glutamine from glutamate and ammonia in an ATP-dependent reaction. There are two main classes of glutamine synthetases in plants :GLN1 is the cytoplasmic form and GLN2 is the chloroplast form. GLN1 is abundant in the vascular components of roots, nodules, flowers and fruits, and is involved in ammonia assimilation and glutamine biosynthesis for nitrogen transport. GLN2 is encoded by a single gene and is abundant in the chloroplasts of mesophyll. Here, GLN plays a role in the assimilation of ammonia produced by photorespiration and the reduction of nitrate in chloroplasts

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