

product **AS01 018**
GlnA | glutamine synthetase

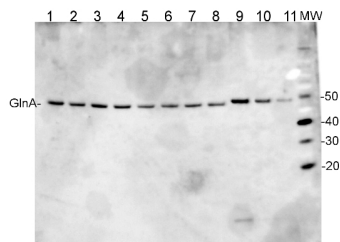
product information

background	Glutamine synthetase is the key enzyme in the incorporation of mineral nitrogen into glutamine.
immunogen	<u>KLH</u> -conjugated synthetic peptide derived from available bacterial GlnA sequences with perfect conservation in alpha, beta, gamma Proteobacteria, Enterobacteria, Thermotogales, Low GC Gram+, Cyanobacteria (except weak conservation with <i>Trichodesmium thiebautii</i>) including <i>Synechocystis</i> PCC 6803 (Q59981)
antibody format	hen polyclonal total IgY in PBS pH 8.0+ 0.02% sodium azide, conc. 16 µg/µl liquid
quantity	50 µl
storage	store at 4 °C; make aliquots to avoid working with a stock. Please, remember to spin tubes briefly prior to opening them to avoid any losses that might occur from liquid material adhering to the cap or sides of the tubes.
tested applications	western blot (WB)
additional information	Peptide target used to elicit this antibody has a weak, sporadic conservation with Glutamine Synthetase to III, antibody not expected to detect this enzyme. Weak conservation with some Glutaminyl-tRNA synthetase (Glutamine--tRNA ligase) (GLNRS), but antibody not expected to detect this enzyme.

application information

recommended dilution	1:5000 with standard ECL (WB)
expected apparent MW	53 kDa
confirmed reactivity	<i>Synechococcus</i> sp. 7942, <i>Synechocystis</i> sp. 6803
predicted reactivity	alpha, beta, gamma proteobacteria, enterobacteria, thermotogales, euryarchaeotes, crenarchaeotes, <i>Arthrospira</i> sp. PCC 8005
not reactive in	eukaryotic GlnA
additional information	n.a.
selected references	Brown et al. (2008). Flux capacities and acclimation costs in <i>Trichodesmium</i> from the Gulf of Mexico. <i>Marine Biol.</i> 154:413-422. Burns et al. (2006). Inorganic carbon repletion constrains steady-state light acclimation in the cyanobacterium <i>Synechococcus elongatus</i> . <i>J. Phycol.</i> 42:610-621.

application example



3 µg of total protein from *Trichodesmium* IMS 101 extracted with PEB (**AS08 300**) (1-8) and GlnA protein standard 0.3, 0.15, 0.07 pmol (9-11) 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: 50 000 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-hen IgY horseradish 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 manufacturer's instructions. Images of the blots were obtained using a CCD imager and Quantity One software Exposure time was 10 seconds.