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Product no AS01 018

GlnA | Glutamine synthetase

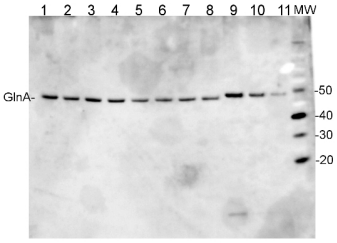
Product information

Immunogen	KLH-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 *Trichodesmium thiebautii*) including *Synechocystis* PCC 6803 Q59981
Host	Chicken
Clonality	Polyclonal
Purity	Purified, total IgY (chicken egg yolk immunoglobulin) in PBS pH 8. Contains 0.02 % sodium azide.
Format	Liquid
Quantity	50 µl (16 mg/ml)
Storage	Store at 4°C; make aliquots to avoid working with a stock. 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	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 this antibody is not expected to detect this enzyme

Application information

Recommended dilution	1 : 5000 (WB)
Expected | apparent MW	53 kDa
Confirmed reactivity	*Deinococcus radioduransm Synechococcus* sp. strain PCC 7942, *Synechocystis* sp. strain PCC 6803, *Trichodesmium* IMS
Predicted reactivity	Alpha, beta, gamma proteobacteria, *Arthropsira sp. P*CC 8005, *Crenarchaeotes, Enterobacteria, Escherichia coli, Euryarchaeotes, Thermotogales* Species of your interest not listed? Contact us
Not reactive in	Diatoms, eukaryotic GlnA
Selected references	Schmier and Shuman (2018). Deinococcus radiodurans HD-Pnk, a Nucleic Acid End-Healing Enzyme, Abets Resistance to Killing by Ionizing Radiation and Mitomycin C. J Bacteriol. 2018 Aug 10;200(17). pii: e00151-18. doi: 10.1128/JB.00151-18. Brown et al. (2008). Flux capacities and acclimation costs in Trichodesmium from the Gulf of Mexico. Marine Biol. 154:413-422. Burns et al. (2006). Inorganic carbon repletion constrains steady-state light acclimation in the cyanobacterium Synechococcus elongatus. J. Phycol. 42:610-621.

Application example



3 µg of total protein from *Trichodesmium* IMS 101 extracted with Agrisera Protein Extration Buffer (**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% blocking reagent 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) diluted to 1:50 000 in 2% blocking solution for 1h at room temperature with agitation. The blots were washed as above and developed for 5 min with chemiluminescent detection reagent in extreme femtogram range, according the manufacturer's instructions. Images of the blots were obtained using a CCD imager

nd Quantity One software Exposure time was 10 seconds.

Total protein (1.5 µg) from *Synechococcus* sp. strain PCC 7942 **(1)** and *Synechocystis* sp. strain PCC 6803 **(2)** and GlnA recombinant protein standard (AS09 018S), 600, 400 and 200 fmol **(3-5)** were separated on a 4-12% Bolt gel (Thermo-Fisher) LDS-PAGE and blotted 1h to PVDF. Blots were blocked immediately following transfer in 2% blocking agent 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 GlnA primary antibody (AS01 018) diluted to 1:20 000 in 2% blocking solulution for 1h at room temperature with agitation. The antibody solution was decanted and the blot was rinsed briefly three times, 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-chicken IgY horseradish peroxidase conjugated, AS10 1489) diluted to 1:20 000 in 2% blocking solution for 1h at room temperature with agitation. The blots were washed as above and developed for 5 min with chemiluminescent detection reagent of extreme femotgram sensitivity, according the manufacturer's instructions. Images of the blots were obtained using a CCD imager and Quantity One software. Exposure time was 15 seconds.