

product **AS03 030S**
AtpB | protein standard

product information

background	ATP synthase is the universal enzyme that synthesizes ATP from ADP and phosphate using the energy stored in a transmembrane ion gradient. This product is a recombinant protein standard, source: <i>Synechocystis</i> strain PCC 6803.
immunogen	does not apply
antibody format	does not apply
quantity	250 µl lyophilized, for reconstitution add 225 µl of milliQ 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	global antibodies are raised against highly conserved amino acid sequences in the AtpB protein. The AtpB protein standard can therefore be used in combination with global anti-AtpB antibodies to quantitate AtpB from a wide range of species. Quantitative western blot: detailed method description .

application information

recommended dilution	standard curve: 3 loads are recommended (0.5, 2 and 4µl). For most applications a sample load of 0.2µg of chlorophyll will give a AtpB signal in this range. positive control: load per well: a 2µl load is optimal for most chemiluminescent detection systems. This standard is stabilized and does not require heating before loading on the gel.
expected apparent MW	in most gel systems AtpB migrates around 50-54 kDa
confirmed reactivity	does not apply
predicted reactivity	does not apply
not reactive in	no confirmed exceptions from predicted reactivity known in the moment
additional information	

Concentration: after adding 225 μ l of dest. water final concentration of the standard is 0.27 pmol/ μ l

Protein standard buffer composition: Glycerol 10%, Tris Base 141 mM, Tris HCl 106 mM, LDS 2%, EDTA 0.51 mM, SERVA® Blue G250 0.22 mM, Phenol Red 0.175 mM, pH 8.5, 0.1mg/ml PefaBloc protease inhibitor (Roche), 50mM DTT.

selected references

[Brown](#) et al. (2007) Resource dynamics during infection of *Micromonas pulsilla* by virus MpKSp1. *Environmental Microbiology* 11: 2720-2727.

application example

AtpB protein standard (AS03 030S) 0.03, 0.1, 0.26 pmol (**1-3**) and total protein from *Trichodesmium* IMS 101 extracted with PEB (**AS08 300**) 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 nd Quantity One software Exposure time was 10 seconds.

Note: Optimal quantitation is achieved using moderate sample loads per gel lane, generally 0.5 to 2.5 μ g total protein, depending on the abundance of the target protein.

