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Agrisera AB | Box 57 | SE-91121 Vännäs | Sweden | +46 (0)935 33 000 | www.agrisera.com

Product no AS05 085

AtpB | Beta subunit of ATP synthase (chloroplastic + mitochondrial) (rabbit antibodies)

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.
Immunogen	KLH-conjugated synthetic peptide derived from available plant, algal (chloroplastic and mitochondrial) and bacterial sequences of beta subunits of F-type ATP synthases, including *Arabidopsis thaliana* chloroplastic ATP synthase subunit beta UniProt: P19366, TAIR: AtCg00480 and *Arabidopsis thaliana* mitochondrial ATP synthase subunit beta-1, UniProt: P83483, TAIR: At5g08670 as well as *Chlamydomonas reinhardtii,* UniProt: P06541 and A8IQU3
Host	Rabbit
Clonality	Polyclonal
Purity	Serum
Format	Lyophilized
Quantity	50 µl
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 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	Blue Native-PAGE (BN-PAGE), Immunofluorescence (IF), Western blot (WB)
Related products	AS05 085-10 | Anti-AtpB rabbit antibody, smaller pack size of AS05 085, rabbitantibodies AS05 085PRE | AtpB | beta subunit of ATP synthase, pre-immune serum AS03 030 | Anti-AtpB hen antibody (developed to exactly the same peptide as rabbit antibody) AS03 030S | ATP synthase subunit beta protein standard for quantitation and positive control AS08 304 | Anti-ATP synthase subunit alpha, rabbit antibodies AS08 312 | Anti-ATP synthase subunit gamma rabbit antibodies AS05 071 | Anti-ATP synthase subunit c rabbit antibodies AS16 3976 | Anti-AtpB | Beta subunit of ATP synthase, mitochondrial, rabbit antibodies Plant and algal protein extraction buffer
Additional information	The anti-AtpB antibody will detect the mitochondrial form of the F1 ATP synthase subcomplex, as well as the chloroplastic CF1 Atp Synthase, and most known bacterial F-type Atp Synthases. Peptide used for antibody production is located in a beta sheet, which is partly exposed near the surface of the AtpB protein. Anti-AtpB antibody was used as a loading control in *Chlamydomonas reinhardtii* and *Synechocystis* sp. PCC6803. This product can be sold containing proclin if requested

Application information

Recommended dilution	1 : 100 (IF), 1 : 5000 (BN-PAGE), 1 : 2000-1 : 5 000 (WB)
Expected | apparent MW	53.9 kDa (*Arabidopsis thaliana*), 51.7 kDa (*Synechocystis* PCC 6803), 53.7 kDa (*Spinacia oleracea*)
Confirmed reactivity	*Arabidopsis thaliana, Bacillus cereus, Bryopsis corticulans, Chlamydomonas reinhardtii, Chlorella vulgaris, Chromochloris zofingiensis, Cyanidioschyzon merolae, Echinochloa crus/galli, Escherichia coli, Helicobacter pylori, Hordeum vulgare, Glycine max, Lycopersicum esulentum, Moniliophthora perniciosa*, *Nannochloropsis salina*, *Neochloris oleoabundans* (chlorophyta), *Nicotiana bentamiana, Nicotiana tabacum*, *Oryza sp.* (roots, leafs, pollen), *Pheodactylum tricornutum CCAP 1055/1, Pisum sativum*, *Plasmodium berghei*, *Populus sp., Robinia pseudoacacia, Selaginella martensii, Spinacia oleracea, Toxoplasma gondii, Zea mays* Animal tissues from: cow, chicken, pig, rat, salmon, seal, *Locusta migratoria*

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Predicted reactivity

Acinetobacter baumannii, Algae, Brassica napus, Cannabis sativa, Clostridium sp., Cyanobacteria, E.coli K-12, Galdieria sulphuraria, Manihot esculenta, Nicotiana plumbaginifolia, Saccharomyces cerevisiae, Salmonella typhimurium, Trichodesmium erythraeum, Triticum aestivum, Vitis vinifera, Zosteria marina, Yrsinia sp.
Species of your interest not listed? Contact us

Not reactive in

Archeal V-type ATP synthase

Additional information

Blue Native gel electrophoresis (BN-PAGE) has been performed on samples solubilized with digitonin (4:1) and loaded at 100 µg/well. Gel thickness was 2 mm with 4.5-16 % gradient.

Antibody is recognizing mitochondrial form of AtpB Subota el. al (2011).

This antibody can be used as a loading control for bacteria, *Bacillus cereus*.
For high resolution images, please visit the specific product page at www.agrisera.com

Selected references

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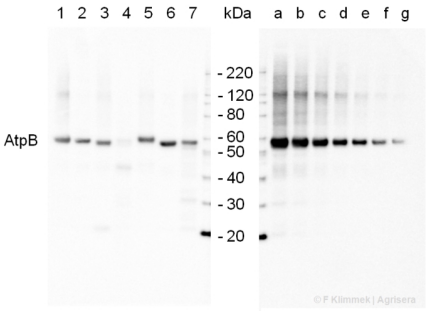
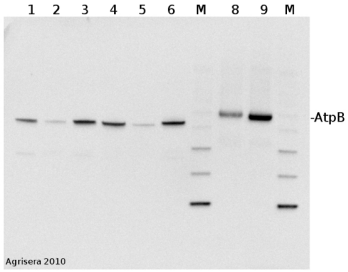
Application example



2 µg of total protein extracted with PEB (**AS08 300**) from leaf tissue of (**1**) *Arabidopsis thaliana*, (**2**) *Spinacia oleracea*, (**3**) *Lycopersicon esculentum*, (**4**) *Glycine max*, (**5**) *Populus* sp., (**6**) *Zea mays* and (**7**) *Hordeum vulgare* were separated on **4-12%** NuPage (Invitrogen) **LDS-PAGE** and blotted 1h to **nitrocellulose**. In parallel a dilution row (**a**-**g**: 10 - 5 - 2.5 - 1.25 - 0.63 - 0.32 - 0.16 µg protein/lane) from sample **1** (*Arabidopsis*) was processed. Filters were blocked 1h with 2% low-fat **milk powder** in TBS-T (0.1% TWEEN 20) and probed with **anti-AtpB** (AS08 085, **1:5000**, 1h) and secondary anti-rabbit (**1:10000**, 1 h) antibody (HRP conjugated, recommended secondary antibody AS09 602) in TBS-T containing 2% low fat milk powder. Antibody incubations were followed by washings in TBS-T (15, +5, +5, +5 min). All steps were performed at RT with agitation. Signal was detected with chemiluminescent substrate, using a Fuji LAS-3000 CCD (300s, standard sensitivity).



2 µg of total protein from (**1**) cow muscle, **(2)** chicken muscle, **(3)** pig muscle, **(4)** rat liver, **(5)** salmon muscle, **(6)** seal muscle, **(8)** *Arabidopsis thaliana*, **(9)** *Zea mays* extracted with **P**rotein **E**xtration **B**uffer, PEB (**AS08 300**) and 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 (Agrisera anti-rabbit IgG horse radish peroxidase conjugated, AS09 602) 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 according to the manufacturers instructions. Images of the blots were obtained using a CCD imager (FluorSMax, Bio-Rad) and Quantity One software (Bio-Rad). Exposure time was 30 seconds.

M - molecular weight marker