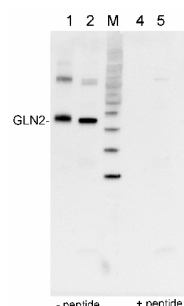


Product no **AS08 296****Anti-GLN2 | GS2, chloroplastic form of glutamine synthetase****Product information**

<b>Immunogen</b>	KLH-conjugated synthetic peptide which is a part of part of the glutamine synthetase/guanido kinase superfamily catalytic region chosen from various available sequences, including <i>Arabidopsis thaliana</i> GLN2, UniProt: <a href="#">Q43127</a> , TAIR: <a href="#">AT5G35630</a>
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Purity</b>	Serum
<b>Format</b>	Lyophilized
<b>Quantity</b>	50 µl
<b>Reconstitution</b>	For reconstitution add 50 µl of sterile water
<b>Storage</b>	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.
<b>Additional information</b>	This product can be sold containing proclin if requested

**Application information**

<b>Recommended dilution</b>	1 : 5000 on 0.5-5 µg protein/lane detection (WB)
<b>Expected   apparent MW</b>	47   44-45 kDa
<b>Confirmed reactivity</b>	<i>Arabidopsis thaliana</i> , <i>Nicotiana tabacum</i> , <i>Oryza sativa</i> , <i>Pisum sativum</i> , <i>Spinacia oleracea</i>
<b>Predicted reactivity</b>	<i>Brassica napus</i> , <i>Diplotaxis tenuifolia</i> , <i>Eruca versicaria</i> , <i>Glycine max</i> , <i>Hordeum vulgare</i> , <i>Medicago truncatula</i> , <i>Pinus sylvestris</i> , <i>Phaseolus vulgaris</i> , <i>Physcomitrium patens</i> , <i>Populus sp.</i> , <i>Triticum aestivum</i> , <i>Zea mays</i>
	Species of your interest not listed? <a href="#">Contact us</a>
<b>Not reactive in</b>	Diatoms
<b>Selected references</b>	<p><a href="#">Gilad</a> et al. (2025). Nitrogen Assimilation Plays a Role in Balancing the Chloroplastic Glutathione Redox Potential Under High Light Conditions. <i>Plant Cell Environ.</i> 2025 Jan 9. doi: 10.1111/pce.15368.</p> <p><a href="#">Chang</a> et al. (2023). Chloroplast import motor subunits FtsHi1 and FtsHi2 are located on opposite sides of the inner envelope membrane. <i>PNAS.</i> 2023 Sep 12;120(37):e2307747120. doi: 10.1073/pnas.2307747120. Epub 2023 Sep 5.</p> <p><a href="#">Hertle</a> et al. (2021). Horizontal genome transfer by cell-to-cell travel of whole organelles. <i>Science Advances.</i> Volume 7. 01 Jan 2021 : eabd8215 DOI: 10.1126/sciadv.abd8215</p> <p><a href="#">Ancin</a> et al. (2021) Overexpression of thioredoxin m in chloroplasts alters carbon and nitrogen partitioning in tobacco. <i>J Exp Bot.</i> 2021 Jun 22;72(13):4949-4964. doi: 10.1093/jxb/erab193. PMID: 33963398; PMCID: PMC8219043.</p> <p><a href="#">Chen</a> et al. (2018). TIC236 links the outer and inner membrane translocons of the chloroplast. <i>Nature.</i> 2018 Dec;564(7734):125-129. doi: 10.1038/s41586-018-0713-y.</p> <p><a href="#">Tamburino</a> et al. (2017). Chloroplast proteome response to drought stress and recovery in tomato (<i>Solanum lycopersicum</i> L.). <i>BMC Plant Biol.</i> 2017 Feb 10;17(1):40. doi: 10.1186/s12870-017-0971-0.</p> <p><a href="#">Dixit</a> (2015). Sulfur alleviates arsenic toxicity by reducing its accumulation and modulating proteome, amino acids and thiol metabolism in rice leaves. <i>Sci Rep.</i> 2015 Nov 10;5:16205. doi: 10.1038/srep16205.</p>

**Application example**

**0.5 µg of protein** from *Arabidopsis thaliana* total leaf fraction (1), **5 µg of protein** from *Spinacia oleracea* chloroplast enriched fraction (2), molecular weight markers (MagicMark™, Invitrogen) (M), the same samples as in 1 and 2 but after peptide neutralisation assay, e.g. incubation of the antibody with 100 mM excess of peptide used to elicit anti-GLN2 antibody (4,5), extracted with PEB (AS08 300), were separated on 4-12% NuPage (Invitrogen) **LDS-PAGE** and blotted 1h to **PVDF** (Millipore). Filters were blocked 1h with 2% low-fat **milk powder** in TBS-T (0.1% TWEEN 20) and probed with anti-GLN2 antibody (AS08 296, **1:5 000**, 1h) and secondary anti-rabbit (**1:20000**, 1 h) antibody (HRP conjugated) in TBS-T containing 2% low fat milk powder. Antibody incubations were followed by washings in TBS-T. All steps were performed at RT with agitation. Blots were 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).