

product **AS06 183**

GS | glutathione synthase, GSH-S

product information

background	Glutathione synthetase (GSH-S) catalyses the last step of glutathione (GSH) synthesis. GSH is synthesized in two ATP-dependent steps: in the first, gamma-glutamylcysteine (gamma-EC) is synthesized from L-glutamate and cysteine, catalyzed by gamma-glutamylcysteine synthetase (g-ECS); in the second step, catalysed by GSH-S, glycine is added to the C-terminal end of gamma-EC. GSH is the predominant non-protein thiol in all nearly where it acts as an antioxidant in stress responses and as a mobile pool of reduced sulfur. It is also important in the regulation of plant growth and development
immunogen	<u>KLH</u> -conjugated synthetic peptide derived from <i>Zea mays</i> GSH-S sequence <u>Q8W4W2</u>
antibody format	rabbit polyclonal total IgG in PBS pH 7.4 lyophilized
quantity	100 µl for reconstitution add 100 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	western blot (WB), immunolocalization (IL)
related products	<u>AS06 181</u> anti-GR glutathione reductase <u>collection of antibodies to plant stress proteins</u>
additional information	total IgG concentration is 3.7 µg/µl

application information

recommended dilution	1:2 000 with standard ECL (WB)
expected apparent MW	45 kDa
confirmed reactivity	<i>Nicotiana tabacum</i> , <i>Zea mays</i>
predicted reactivity	dicots including: <i>Arabidopsis thaliana</i> , <i>Pisum sativum</i> , <i>Solanum lycopersicum</i> , monocots including: <i>Hordeum vulgare</i> , <i>Oryza sativa</i>
not reactive in	no confirmed exceptions from predicted reactivity known in the moment
additional information	Immunolocalization has been done for <i>Arabidopsis thaliana</i> and <i>Nicotiana tabacum</i>
selected references	<u>Baojian</u> et al. (2014). Maize (<i>Zea mays</i> L.) seedling leaf nuclear proteome and differentially expressed proteins between a hybrid and its parental lines. Proteomics, DOI: 10.1002/pmic.201300147. <u>Gomez</u> et al. (2004) Intercellular distribution of glutathione synthesis in maize leaves and its response to short term chilling. Plant Physiol. 134: 1662-1671.