

product **AS06 186**

Gamma-ECS | gamma glutamylcysteine synthase

product information

background	Gamma-glutamylcysteine synthase (gamma-ECS) (EC 6.3.2.2) catalyses the first step of glutathione (GSH) synthesis, producing gamma-glutamylcysteine (gamma-EC) from L-glutamate and cysteine. In the second step, catalyzed 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> gamma-ECS <u>Q8W4W3</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)
additional information	total IgG concentration is 5.2 µg/ µl

application information

recommended dilution	1: 5000 with standard ECL (WB), 1: 5000 (IL)
expected apparent MW	50 kDa
confirmed reactivity	<i>Nicotiana tabacum</i> , <i>Solanum lycopersicum</i> , <i>Zea mays</i>
predicted reactivity	dicots including: <i>Arabidopsis thaliana</i> , <i>Pisum sativum</i> , <i>Ricinus communis</i> , monocots including: <i>Oryza sativa</i> , <i>Triticum aestivum</i>
not reactive in	no confirmed exceptions from predicted reactivity known in the moment
additional information	antibodies has been used in immunolocalization on <i>Arabidopsis thaliana</i>
selected references	<u>Ghanta</u> et al. (2011). <i>Nicotiana tabacum</i> overexpressing -ECS exhibits biotic stress tolerance likely through NPR1-dependent salicylic acid-mediated pathway. <i>Planta</i> 233(5):895-910. <u>Gomez</u> et al. (2004). Intercellular distribution of glutathione synthesis in maize leaves and its response to short term chilling. <i>Plant Physiol</i> 134: 1662-1671; <u>Mittova</u> et al. (2003). Co-ordinate induction of glutathione biosynthesis and

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Antibodies for research

This product is **for research use only** (not for diagnostic or therapeutic use)

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glutathione-metabolising enzymes is correlated with salt tolerance in tomato.
FEBS Letts. 554: 417-421.