

product **AS01 004**

**Lhcb1 | LHCII type I chlorophyll a/b-binding protein (100 µl)**

### product information

<b>background</b>	The major light-harvesting antenna complex II (LHCII) in photosynthetic eukaryotes is located in the thylakoid membrane of the chloroplast. It is a heterotrimeric complex formed by up to 3 different individual subtypes of chlorophyll a/b-binding proteins: Lhcb1, Lhcb2, and Lhcb3. <b>Lhcb1</b> is the most abundant chlorophyll a/b-binding protein in eukaryotic phototrophs and often is coded by several nuclear genes.
<b>immunogen</b>	<u>BSA</u> -conjugated synthetic peptide derived from a highly conserved sequence of Lhb1 proteins from angiosperms (monocots and dicots) and gymnosperms, including <i>Arabidopsis thaliana</i> <a href="#">At1g29910</a> (Lhcb1.1), <a href="#">At1g29920</a> (Lhcb1.2), <a href="#">At1g29930</a> (Lhcb1.3, most expressed), <a href="#">At2g34430</a> (Lhcb1.4), and <a href="#">At2g34420</a> (Lhcb1.5)
<b>antibody format</b>	rabbit polyclonal, total IgG in PBS pH 7.4, lyophilized
<b>quantity</b>	200 µl - for reconstitution add 200 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 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.
<b>tested applications</b>	western blot (WB); immunohistochemistry (IHC), immunogold (IG)
<b>additional information</b>	A molecular characterisation of the LHCII proteins can be found in <a href="#">Caffarri et al. (2004)</a> A Look within LHCII: Differential Analysis of the Lhcb1–3 Complexes Building the Major Trimeric Antenna Complex of Higher-Plant Photosynthesis. <i>Biochemistry</i> 43 (29): 9467–9476

### application information

<b>recommended dilution</b>	1 : 2000, detected with standard ECL (WB), 1: 100 - 1: 500 (IG)
<b>expected   apparent MW</b>	25   25 kDa for <i>Arabidopsis thaliana</i>
<b>confirmed reactivity</b>	<i>Arabidopsis thaliana</i> , <i>Arachis hypogaea</i> , <i>Hordeum vulgare</i> , <i>Lycopersicon esculentum</i> ( <i>Solanum lycopersicon</i> ), <i>Mesembryanthemum crystallinum</i> , <i>Nicotiana tabacum</i> , <i>Oryza sativa</i> , <i>Pisum sativum</i> , <i>Phaseolus vulgaris</i> , <i>Silene vulgaris</i> , <i>Spinacia oleracea</i> , <i>Zea mays</i> and <i>Chlamydomonas reinhardtii</i>
<b>predicted reactivity</b>	angiosperms (monocots and dicots), gymnosperms, mosses, green algae
<b>not reactive in</b>	no confirmed exceptions from predicted reactivity known in the moment
<b>additional information</b>	

a picture from a WB application of this antibody can be found in publications below.

### selected references

Rudowska et al. (2012). Chloroplast biogenesis - correlation between structure and function. BBA, available on line, March 2012.

Peter et al. (2010). Mg protoporphyrin monomethylester cyclase deficiency and effects on tetrapyrrole metabolism in different light conditions. Plant Cell Physiol. 51(7):1229-1241.

Fristedt et al. (2009). Phosphorylation of photosystem II controls functional macroscopic folding of photosynthetic membranes in Arabidopsis. Plant Cell 21:3950-3964.