

product **AS04 043**

FBPase | cytosolic fructose-1,6-bisphosphatase (cFBP)

product information

background	Fructose-1,6 bisphosphatase (FBPase) is one of the regulatory enzymes in the sucrose biosynthetic pathway. In non-photosynthetic tissues, it regulates the rate of gluconeogenesis. In photosynthetic tissues, two FBPase isozymes (chloroplastic and cytosolic) play key roles in carbon assimilation and metabolism. In photosynthetic tissues cFBPase (cytosolic fructose 1,6 bisphosphatase) converts triose phosphates from the chloroplast to sucrose during light hours.
immunogen	overexpressed cytosolic fructose 1,6 bisphosphatase (cFBPase) derived from the sequence from <i>Arabidopsis thaliana</i> cFBPase P25851
antibody format	rabbit polyclonal serum, 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)
additional information	Kinetic and allosteric properties of the plant cytosolic FBPase are remarkably similar to the mammalian and yeast FBPase, but differ greatly from those of the chloroplastic FBPase. The antibody could detect FBPase from the human COS-7 cell line transfected with FBP1 expressing vector.

application information

recommended dilution	1: 5 000 with standard ECL (WB)
expected apparent MW	45 37 kDa (<i>Arabidopsis thaliana</i>)
confirmed reactivity	<i>Arabidopsis thaliana</i> , <i>Brassica napus</i> , <i>Pinus silvestris</i> , <i>Oryza sativa</i> , cellular compartment marker of cytoplasm
predicted reactivity	dicots including <i>Pisum sativum</i> , <i>Solanum tuberosum</i> and monocots including <i>Zea mays</i>
not reactive in	no confirmed exceptions from predicted reactivity known in the moment
additional information	for image of detection please refer to Strand et al. 2000. This antibody does not react with chloroplastic form of cFBPase.
selected references	Strand et al. (2000). Decreased expression of two key enzymes in the sucrose biosynthesis pathway, cytosolic fructose-1,6-bisphosphatase and sucrose

phosphate synthase, has remarkably different consequences for photosynthetic carbon metabolism in transgenic *Arabidopsis thaliana*. *The Plant Journal*, 23(6), 759-770. [Lee et al \(2008\)](#). Loss of cytosolic fructose-1,6-bisphosphatase limits photosynthetic sucrose synthesis and causes severe growth retardations in rice (*Oryza sativa*). *Plant Cell Environm.* 12:1851-1863.