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Product no AS09 481

Anti-BiP | Lumenal-binding protein (rabbit antibody)

Product information

Immunogen	KLH-conjugated synthetic peptide derived from *Arabidopsis thaliana* BiP proteins: BiP1 At5g28540 Q9LKR3, BiP2 At5g42020 F4K007 , BiP3 At1g09080 Q8H1B3
Host	Rabbit
Clonality	Polyclonal
Purity	Immunogen affinity purified serum in PBS pH 7.4.
Format	Lyophilized
Quantity	50 µg
Reconstitution	For reconstitution add 50 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 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.

Application information

Recommended dilution	1 : 8000 (ELISA), 1 : 600 (IF), 1 : 2000 (WB)
Expected | apparent MW	73.5 | 80 kDa
Confirmed reactivity	*Anacardium occidentale, Arabidopsis thaliana, Brassica napus,Chara australis* R.Br, *Chlamydomonas reinhardtii, Cucumis sativus, Mangifera indica, Moniliophthora perniciosa, Nicotiana benthamiana, Nicotiana tabacum, Raphanus sativa L. Tokinashi-daikon, Olea europaea, Oryza sativa, Picea abies, Pistachio sp., Physcomitrium patens, Schinus molle, Spinacia oleracea, Solanum lycopersicum, Solanum tuberosum, Triticum aestivum, Zea mays*
Predicted reactivity	*Arabis alpina, Capsella rubella, Capsicum annuum, Citrus clementina, Citrus sinsensis, Eucalyptus grandis, Glycine max, Hordeum vulgare, Isatis tincorina, Prunus persica, Triticum aestivium, Petunia hybrida, Picea sitcHensis, Populus trichocarpa, Ricinus comminus, Vitis vinifera* Species of your interest not listed? Contact us
Not reactive in	*Ostreococcus tauri*, *Schizosaccharomyces pombe*
Additional information	Protein or membrane sample should be treated at 70°C for 10 min before loading on the gel, This antibody has so far not worked in IP
Selected references	Zhou et al. (2024). Antagonistic systemin receptors integrate the activation and attenuation of systemic wound signaling in tomato. Dev Cell. 2024 Nov 26:S1534-5807(24)00670-1. doi: 10.1016/j.devcel.2024.11.005. Salomon et al. (2024). Betaine lipids overproduced in seed plants are excluded from plastid membranes and promote endomembrane expansion. J Exp Bot. 2024 Nov 14:erae458. doi: 10.1093/jxb/erae458. Li et al. (2024). Membrane protein MHZ3 regulates the on-off switch of ethylene signaling in rice. Nat Commun. 2024 Jul 16;15(1):5987. doi: 10.1038/s41467-024-50290-4. Miloro et al. (2024). Barley AGO4 proteins show overlapping functionality with distinct small RNA-binding properties in heterologous complementation. Plant Cell Rep. 2024 Mar 13;43(4):96. doi: 10.1007/s00299-024-03177-z. Xue et al.(2023). The PtdIns3P phosphatase MtMP promotes symbiotic nitrogen fixation via mitophagy in Medicago truncatula. iScience. 2023 Sep 15;26(10):107752.doi: 10.1016/j.isci.2023.107752. Gu et al. (2021) A Lipid Bodies-Associated Galactosyl Hydrolase Is Involved in Triacylglycerol Biosynthesis and Galactolipid Turnover in the Unicellular Green Alga Chlamydomonas reinhardtii Dittmer, Kleine, & Schwenkert. (2021) The TPR- and J-domain-containing proteins DJC31 and DJC62 are involved in abiotic stress responses in Arabidopsis thaliana. J Cell Sci. 2021 Oct 1;134(19):jcs259032. doi: 10.1242/jcs.259032. Epub 2021 Oct 12. PMID: 34515300. Shteinberg et al. (2021) Tomato Yellow Leaf Curl Virus (TYLCV) Promotes Plant Tolerance to Drought. Cells. 2021 Oct 25;10(11):2875. doi: 10.3390/cells10112875. PMID: 34831098; PMCID: PMC8616339. Mishra et al. (2021) Interplay between abiotic (drought) and biotic (virus) stresses in tomato plants. Mol Plant Pathol. 2021 Dec 30. doi: 10.1111/mpp.13172. Epub ahead of print. PMID: 34970822. Yang et al. (2020). PROTEIN PHOSPHATASE 95 Regulates Phosphate Homeostasis by Affecting Phosphate Transporter Trafficking in Rice. Plant Cell. 2020 Jan 9. pii: tpc.00685.2019. doi: 10.1105/tpc.19.00685.

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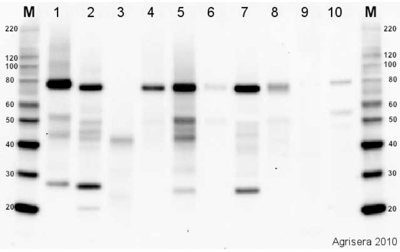
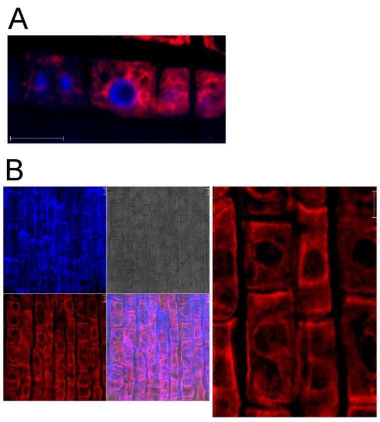


5 µg of total protein from *A.thaliana* **(1)**, *H. vulgare* **(2)**, *P. sativum* **(3)***, *Z. mays* **(4)**, *C. sativus***(5)**, *S. tuberosum* **(6)**, *S. oleracea* **(7)**, *S. lycopersicum* **(8)** *P. patens* **(9)***, *C. reinhardtii* **(10)** extracted with Agrisera PEB extraction buffer (AS08 300) were separated on **4-12% SDS-PAGE** and blotted 1h to **PVDF**. Blots were blocked immediately following transfer in 5 % non-fat milk in TBS-T, for 1h at room temperature with agitation. Blots were incubated in the primary antibody at a dilution of 1: 10 000 for 1h at room temperature with agitation. The antibody solution was decanted and the blot was rinsed briefly twice, then washed once for 15 min and 3 times for 5 min in TBS-T at room temperature with agitation. Blots were incubated in secondary antibody (anti-rabbit IgG horse radish peroxidase conjugated, from Agrisera AS09 602) diluted to 1:50 000 for 1h at room temperature with agitation. The blots were washed as above and developed for 5 min with ECL detection reagent of extreme femtogram range, according to the manufacturers instructions. Exposure time was 5 seconds. * Lack of the signal or its low signal intensity in those samples can be due to the sample biology. If you work with those species, please inquire.

Immunolocalization



BiP localization in 5 days old *Arabidopsis thaliana* roots **(A),** 3 days old *Triticum aestivum* roots **(B).**
BiP signal shown in red, DAPI in blue. The material has been fixed in para-formaldehyde for 30 minutes. Tissue cleaning has been performed before immunolocalization. Rabbit anti-BiP primary antibody diluted in 1: 600 and ALEXA 555 conjugated anti-rabbit secondary antibody (red color) have been used. Co-staining with DAPI visualized nucleus (blue color). Scale bar – 10 µm.

Courtesy Dr. Taras Pasternak, Freiburg University, Germany