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This product is **for research use only** (not for diagnostic or therapeutic use) **contact: support@agrisera.com**

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Product no AS14 2805

NBR1 | Autophagy substrate NBR1

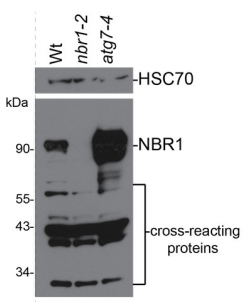
Product information

Immunogen	UBA2 domain of NBR1 of *Arabidopsis thaliana*, fused with GST, UniProt:Q9SB64, TAIR:AT4G24690
Host	Rabbit
Clonality	Polyclonal
Purity	Serum
Format	Lyophilized
Quantity	50 µl
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: 1000 (IL), 1 : 500-1 : 5000 (WB)
Expected | apparent MW	75 | 100 kDa
Confirmed reactivity	*Arabidopsis thaliana, Physcomitrium patens*
Predicted reactivity	*Brassicaceae* family Species of your interest not listed? Contact us
Not reactive in	*Citrus sinensis, Nicotiana tabacum*
Additional information	Specific extraction method and tissue type needs to be used as described in Minina et al, (2013), Dilution in western blot depends upon amount of NBR1 in the sample
Selected references	Lan et al. (2024).Clathrin Light Chains negatively regulate plant immunity by hijacking the autophagy pathway. Plant Commun. 2024 Apr 30:100937.doi: 10.1016/j.xplc.2024.100937. Rodriguez et al. (2020). Autophagy mediates temporary reprogramming and dedifferentiation in plant somatic cells. bioRxiv doi.org/10.1101/747410 Calero-MuÃ?Â±oz et al. (2019). Cadmium induces reactive oxygen species-dependent pexophagy in Arabidopsis leaves. Plant Cell Environ. 2019 Sep;42(9):2696-2714. doi: 10.1111/pce.13597. Jia et al. (2019). Noncanonical ATG8-ABS3 interaction controls senescence in plants. Nat Plants. 2019 Feb;5(2):212-224. doi: 10.1038/s41477-018-0348-x. Hackenberg et al. (2013). Catalase and NO CATALASE ACTIVITY1 promote autophagy-dependent cell death in Arabidopsis. Plant Cell. 2013 Nov;25(11):4616-26. doi: 10.1105/tpc.113.117192. Epub 2013 Nov 27. Minina et al. (2013). Autophagy mediates caloric restriction-induced lifespan extension in Arabidopsis. Aging Cell. 2013 Apr;12(2):327-9. doi: 10.1111/acel.12048. Epub 2013 Feb 28. (method description in supplemental materials) Katsiarimpa et al. (2013). The Deubiquitinating Enzyme AMSH1 and the ESCRT-III Subunit VPS2.1 Are Required for Autophagic Degradation in Arabidopsis. Svenning et al. (2011). Plant NBR1 is a selective autophagy substrate and a functional hybrid of the mammalian autophagic adapters NBR1 and p62/SQSTM1. Autophagy. 2011 Sep;7(9):993-1010. Epub 2011 Sep 1. (original reference)

Application example



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Total protein from approximately eight 8-d-old seedlings of *Arabidopsis thaliana* was extracted with NuPAGE sample buffer (106 mM Tris-HCl pH 8.5, 141 mM Tris Base, 2% lithium dodecyl sulfate, 0.51 mM EDTA pH 8.0, 10% glycerol, 0.22 mM Coomassie Blue G250, 0.166 mM Phenol Red) with 50 mM dithiothreitol and denatured at 100°C for 5 min. Proteins were separated by electrophoresis on a Bolt 10% Bis-Tris Plus gel (Invitrogen) and transferred for 40 min at 24 V to an Amersham Protran 0.45 µm nitrocellulose membrane (GE Healthcare Life Sciences) using semidry transfer. The membrane was blocked with 8% milk in TBS-T for 2 h at 4°C with agitation. The membrane was incubated in the primary antibody at a dilution of 1:4000 overnight at 4°C with agitation in 8% milk in TBS-T. The antibody solution was decanted and the blot was rinsed briefly twice, then washed 3 times for 5 min in 8% milk in TBS-T at 4°C with agitation. The membrane was incubated in secondary antibody (horse radish peroxidase conjugated goat anti-rabbit IgG) diluted to 1:5000 in 8% milk in TBS-T for 4 h at 4°C with agitation. The membrane was washed 3 times for 5 min in TBS-T at 4°C with agitation and incubated for 2 min with WesternBright chemiluminescent detection reagent (Advansta). Exposure time was 30 seconds.

Courtesy of Pierce Young, Rice University, USA