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Product no AS15 2962

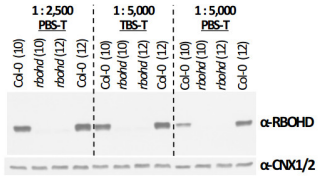
Anti-RBOHD | Respiratory burst oxidase homolog protein D

Product information

Immunogen	KLH-conjugated peptide chosen from *Arabidopsis thaliana* RBOHD sequence, UniProt:Q9FIJ0, TAIR: AT5G47910
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 : 1000 (WB)
Expected | apparent MW	104 kDa
Confirmed reactivity	*Arabidopsis thaliana, Solanum* sp.
Predicted reactivity	*Brassica napus, Citrus sinensis, Citrullus colocynthis, Cucumis melo, Fragaria ananassa, Gossypium arboreum, Hordeum vulgare, Manihot esculenta, Morus notabilis, Nicotiana tabacum, Oryza sativa, Picea abies, Ricinus communis, Sinensis osbeck, Solanum tuberosum, Theobroma cacao, Triticum aestivum, Zea mays, Zostera* marina Species of your interest not listed? Contact us
Not reactive in	*Marchantia polymorpha, Medicago sativa*
Additional information	For solubilization we recommend 65°C for 5 min, Sample boiling is not recommended
Selected references	Goto et al. (2024). The leucine-rich repeat receptor kinase QSK1 regulates PRR-RBOHD complexes targeted by the bacterial effector HopF2Pto.Plant Cell. 2024 Oct 21:koae267.doi: 10.1093/plcell/koae267. Burian et al (2023) A prospective study of short-term apoplastic responses to ammonium treatment. J Plant Physiol. 2023 Jul;286:154008. doi: 10.1016/j.jplph.2023.154008. George J, Stegmann M, Monaghan J, Bailey-Serres J, Zipfel C. Arabidopsis translation initiation factor binding protein CBE1 negatively regulates accumulation of the NADPH oxidase RESPIRATORY BURST OXIDASE HOMOLOG D. J Biol Chem. 2023 Jul 7:105018. doi: 10.1016/j.jbc.2023.105018. Qi et al. (2023) . Overexpression of an Antioxidant Enzyme APX1 in cpr5 Mutant Restores its Pleiotropic Growth Phenotype. Antioxidants. 2023; 12(2):301. https://doi.org/10.3390/antiox12020301. Wang et al. (2021) Arabidopsis PUB2 and PUB4 connect signaling components of pattern-triggered immunity. New Phytol. 2021 Dec 17. doi: 10.1111/nph.17922. Epub ahead of print. PMID: 34918346 Lee et al. (2020). Regulation of reactive oxygen species during plant immunity through phosphorylation and ubiquitination of RBOHD. Nat Commun. 2020 Apr 15;11(1):1838. doi: 10.1038/s41467-020-15601-5. Jedelská et al. (2019). Tomato Root Growth Inhibition by Salinity and Cadmium Is Mediated By S-Nitrosative Modifications of ROS Metabolic Enzymes Controlled by S-Nitrosoglutathione Reductase. Biomolecules. 2019 Aug 21;9(9). pii: E393. doi: 10.3390/biom9090393. Otulak-Kozie? et al. (2019). The Respiratory Burst Oxidase Homolog D (RbohD) Cell and Tissue Distribution in Potato–Potato Virus Y (PVYNTN) Hypersensitive and Susceptible Reactions. Int. J. Mol. Sci. 2019, 20(11), 2741. (innunofluorescence)



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Total proteins were isolated from 10 or 12 seedlings of 7-day-old *Arabidopsis thaliana* seedlings of Col-0 (wild-type) and *rbohd* null mutant (Nühse et al., 2007). 16 µl of total proteins were denatured at 65°C for 5 min, separated on an 8 % SDS-PAGE. and transferred for 70 min at 55V using a tank transfer system to nitrocellulose membrane. Blots were blocked with 1xPBS+0.1% Tween 20 + 5 % milk (PBS-T) or TBS + 0.1 % Tween 20 (TBS-T) + 5 % milk for 2 h at room temperature (RT) with agitation. Primary antibodies were diluted as indicated to 1: 2,500 and 1: 5,000 respectively and incubated ON at 4ºC with agitation in 1xPBS-T pr TBS-T + 5 % milk. The primary antibody solutions were decanted, and the blots were washed 3 times (7 min. each) in 1xPBS-T or TBS-T at RT with agitation. Blot was incubated with secondary antibody goat anti-rabbit HRP conjugated (AS09 602, Agrisera) diluted to 1: 20, 000 and developed with chemiluminescent detection reagent, accodring to manufacture's recommendations. Exposure time was 2 min. for X-ray film. As a control part of the same membrane was incubated with anti-CNX1/2 antibodies (AS12 2365, Agrisera).

References:
Nühse et al. Quantitative phosphoproteomic analysis of plasma membrane proteins reveals regulatory mechanisms of plant innate immune responses. Plant J. 2007 Sep; 51(5): 931–940.

Courtesy of Nga Nguyen, Kelly Mason and Antje Heese (University of Missouri- Columbia, MO, USA