

## Product no **AS09 484**

## **Na<sup>+</sup>/H<sup>+</sup> antiporter, sodium/hydrogen exchanger**

### Product information

<b>Background</b>	<b>Na<sup>+</sup>/H<sup>+</sup> exchanger 1</b> protein is involved in exchange of protons for cations such as sodium and potassium across membranes. Localized in tonoplast, possibly also to ER and Golgi. Alternative name: NHE-1, Na <sup>+</sup> /H <sup>+</sup> exchanger 1
<b>Immunogen</b>	<u>KLH</u> -conjugated synthetic peptide derived from <i>Arabidopsis thaliana</i> NHX protein UniProt: <u>Q68KI4</u> , TAIR: <u>At5g27150</u> ; chosen peptide is perfectly confirmed in AtNHX1 UniProt: <u>Q0WVZ5</u> , partially in AtNHX2, UniProt: <u>Q56XP4</u> , and not conserved in AtNHX3, UniProt: <u>Q84WG1</u> and AtNHX4, UniProt: <u>Q8S397</u> isoforms
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Purity</b>	Affinity purified in PBS pH 7.4
<b>Format</b>	Lyophilized
<b>Quantity</b>	50 µl
<b>Reconstitution</b>	For reconstitution add 50 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>	ELISA (ELISA), Western blot (WB)
<b>Related products</b>	<a href="#">collection of antibodies to tonoplast proteins</a> <a href="#">Plant protein extraction buffer</a> <a href="#">Secondary antibodies</a>
<b>Additional information</b>	Protocol for vacuolar membrane isolation can be found <a href="#">here</a> .

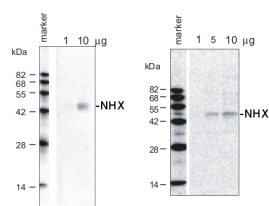
### Application information

<b>Recommended dilution</b>	1 : 8000 (ELISA), 1 : 1000 (WB)
<b>Expected   apparent MW</b>	59.5   45 kDa
<b>Confirmed reactivity</b>	<i>Arabidopsis thaliana</i> , <i>Kandelia obovata</i> , <i>Oryza sativa</i> , <i>Solanum lycopersicum</i> , <i>Vitis vinifera</i>
<b>Predicted reactivity</b>	<i>Gossypium hirsutum</i> , <i>Populus euphratica</i> , <i>Ricinus communis</i> , <i>Zea mays</i> Species of your interest not listed? <a href="#">Contact us</a>
<b>Not reactive in</b>	Mangrove plants, <i>Nicotiana benthamiana</i> , sp. <i>Avicennia</i> ,
<b>Selected references</b>	<a href="#">Gupta</a> and Shaw (2020). Biochemical and molecular characterisations of salt tolerance components in rice varieties tolerant and sensitive to NaCl: the relevance of Na <sup>+</sup> exclusion in salt tolerance in the species . Funct Plant Biol. 2020 Jul 30.doi: 10.1071/FP20089 <a href="#">Prinsi</a> et al. (2020). Root Proteomic Analysis of Two Grapevine Rootstock Genotypes Showing Different Susceptibility to Salt Stress. Int J Mol Sci. 2020 Feb 6;21(3). pii: E1076. doi: 10.3390/ijms21031076. <a href="#">Guo</a> et al. (2018). Molecular Characterization of a Tonoplast Na <sup>+</sup> /H <sup>+</sup> Antiporter from Iris Lactea. Preprints 2018, 2018090557 (doi: 10.20944/preprints201809.0557.v1). <a href="#">Kumari</a> et al. (2017). Overexpression of a Plasma Membrane Bound Na <sup>+</sup> /H <sup>+</sup> Antiporter-Like Protein (SbNHXLp) Confers Salt Tolerance and Improves Fruit Yield in Tomato by Maintaining Ion Homeostasis. Front Plant Sci. 2017 Jan 6;7:2027. doi: 10.3389/fpls.2016.02027. <a href="#">Chen</a> et al. (2013). Nitric Oxide Mediates Root K <sup>+</sup> /Na <sup>+</sup> Balance in a Mangrove Plant, Kandelia obovata, by Enhancing the Expression of AKT1-Type K <sup>+</sup> Channel and Na <sup>+</sup> /H <sup>+</sup> Antiporter under High Salinity. 8(8): e71543.

doi:10.1371/journal.pone.0071543.

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## Application example



**1 µg and 10 µg of crude membrane fraction/lane** from *Arabidopsis thaliana* (left panel) and **1, 5 and 10 µg of crude membrane fraction/lane** *Raphanus sativus* L. (right panel) were separated on 12 % **SDS-PAGE** and blotted 1h to PVDF membrane (40 min. at 10 V using BioRad semidry transfer). Filters were blocked 1h with 5 % low-fat **milk powder** in TBS-T (0.05% Triton X.100). Membranes were washed 5 times with TBS-T, each time in a fresh polystyrene box and probed with anti-NHX antibodies (AS09 484, **1:1000**, 1h) and secondary anti-rabbit (**1:2000**, 1 h). Detection was done using chemiluminescence. All steps were performed in RT with agitation.