

Product Information

Anti-NHERF-1 (Na⁺/H⁺ exchanger regulatory factor 1, EBP-50)

Developed in Rabbit
Affinity Isolated Antibody

Product Number **N 7286**

Product Description

Anti-NHERF-1 was developed in rabbit using a highly purified peptide IQKENSREALVEPA, corresponding to amino acids 261-274 of rat NHERF-1 with an additional N-terminal cysteine as the immunogen. The antibody was affinity isolated on immobilized immunogen.

Anti-NHERF-1 specifically recognizes the NHERF-1 in rat kidney membranes by immunoblotting. It does not cross react with NHERF-2 or PDZ-containing proteins.

The Na⁺/H⁺ exchanger regulatory factor (EBP-50 or NHERF-1) is a 55 kDa cytoplasmic protein adaptor that recruits a wide variety of cellular proteins. Many of the interacting proteins do so through the two tandem PDZ domains (protein-binding domains conserved in the mammalian synaptic protein PSD-95/DlgA/ZO-1) and the C-terminal ERM (ezrin, radixin, moesin) binding region.¹ NHERF-1 was first identified as an adaptor necessary for the function of the Na⁺/H⁺ exchanger isoform 3 (NHE3) in renal apical cells.² Since then it has been identified in cells of epithelial origin in several tissues such as gastrointestinal and lung. NHERF-1 has been shown to interact with a growing number of proteins including ion channels (ROMK, CFTR, P2Y1, TRPC4 and TRPC6), growth factor receptors (PDGFR), phospholipase C isoforms (PLCb1, PLCb2, PLCb3), non-receptor protein tyrosine kinases (YAP65) and several cytoskeletal proteins that link membrane proteins to the underlying actin cytoskeleton.^{1,3} Recently it has been showed that NHERF-1 expression was elevated in breast tumors compared to the expression in adjacent normal tissue.⁴

Reagents

Anti-NHERF-1 is supplied lyophilized from phosphate buffered saline, pH 7.4, with 1% bovine serum albumin, 5% sucrose, and 0.05 % sodium azide as preservative.

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling.

Storage/Stability

Lyophilized powder can be stored intact at room temperature for several weeks. For extended storage, it should be stored at -20 °C or below. The reconstituted solution can be stored at 4 °C for up to 2 weeks. For longer periods, it is recommended to add glycerol at a ratio of 1:1 and to keep the antibody solution at -20 °C. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Centrifuge all antibody preparations before use (10000 x g 5 min). Working dilution samples should be discarded if not used within 12 hours.

Product Profile

The recommended working dilution is 1µg/ml (1:200) for immunoblotting.

Note: In order to obtain best results and assay sensitivities of different techniques and preparations, we recommend determining optimal working dilutions by titration test.

References

1. Voltz, J.W., et al., *Oncogene*, **20**, 6309-6314 (2001).
2. Lederer, E.D., et al., *J. Am. Soc. Nephrol.*, **14**, 1711-1719 (2003).
3. Weinman, E.J., *J. Clin. Invest.*, **108**, 185-186 (2001).
4. Ediger, T.R., et al., *Mol. Endocrinol.*, **16**, 1828-1839 (2002).

mct/jk 4/2004