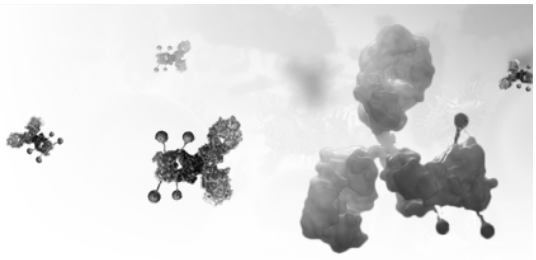

Mouse anti-Rat NHE monoclonal antibody, clone 65/OIF (CABT-B9244)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Specificity	Although this antibody was developed against the NHE-1 antigen, investigators should note that crossreactivity to other NHE isoforms or variants may be possible.
Immunogen	Rat NHE-1 aa. 682-801
Isotype	IgG1
Source/Host	Mouse
Species Reactivity	Human, Mouse, Rat, Dog
Clone	65/OIF
Purification	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Conjugate	Unconjugated
Applications	WB; IF
Format	Liquid
Concentration	250 µg/ml
Size	50 µg, 150 µg
Buffer	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.
Storage	Store undiluted at -20°C.

BACKGROUND

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Introduction	The extrusion of H+ in exchange for extracellular Na+ is important for many cellular processes, such as pH homeostasis, volume regulation, and transepithelial ion and water transport. Na+/H+ Exchangers (NHE) are integral membrane proteins that mediate electroneutral exchange of one Na+ ion for one H+ ion. Six NHE forms, NHE-1 thru -6, have been identified. NHE-1 and NHE-6 are widely expressed, while the other NHE forms have restricted expression. The common structure of all NHE forms includes 10-12 N-terminal membrane (M) spanning regions, a conserved M6 and M7 region that may participate in ion transport, and a large C-terminal cytoplasmic region that may be involved in the regulation of ion exchange activity. NHE-1, for example, contains 12 M regions plus domains for volume sensitivity, calmodulin-binding, CHP-binding, and PKC phosphorylation in the cytoplasmic region. Regulation of NHE-1 ion exchange activity may occur through phosphoinositide binding, as well as PKC- and PKA-dependent signaling pathways. Mutation of NHE-1 in mice causes neuronal death in the cerebellum and brainstem, leading to ataxia and seizures. Thus, NHE-1 is a ubiquitous NHE that is essential for normal brain function.
Keywords	SLC9A1; solute carrier family 9, subfamily A (NHE1, cation proton antiporter 1), member 1; APNH; NHE1; NHE-1; PPP1R143; sodium/hydrogen exchanger 1; Na(+)/H(+) exchanger 1; Na-Li countertransporter; protein phosphatase 1, regulatory subunit 143; solute carrier family 9 (sodium/hydrogen exchanger), member 1 (antiporter, Na+/H+, amiloride sensitive); solute carrier family 9 (sodium/hydrogen exchanger), isoform 1 (antiporter, Na+/H+, amiloride sensitive);

GENE INFORMATION

Entrez Gene ID	6548
UniProt ID	B2RAH2

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