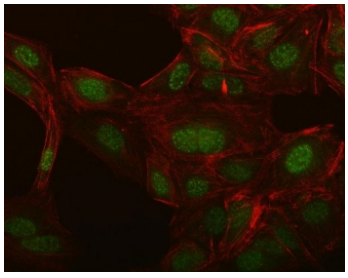
NCX1 Antibody / Sodium Calcium Exchanger Antibody (RQ8309)

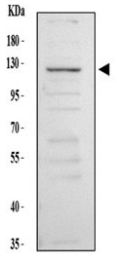
Catalog No.	Formulation	Size
RQ8309	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P32418
Localization	Nuclear, plasma membrane
Applications	Western blot: 0.5-1ug/ml Immunofluorescence: 5ug/ml Direct ELISA: 0.1-0.5ug/ml
Limitations	This NCX1 Antibody / Sodium Calcium Exchanger Antibody is available for research use only.



NCX1 Antibody U-2 OS Cell IF. Immunofluorescent analysis of FFPE human U-2 OS cells using NCX1 Antibody / Sodium Calcium Exchanger Antibody. Heat-induced epitope retrieval was performed by steaming sections in pH6 citrate buffer for 20 minutes. NCX1 was detected with a green fluorescent label, while Phalloidin (red) was used to visualize the actin cytoskeleton. The staining demonstrates NCX1 expression with membrane-associated and cytoplasmic localization, consistent with its role as a plasma membrane sodium-calcium exchanger involved in regulating intracellular calcium homeostasis. This NCX1 Antibody, also called Sodium Calcium Exchanger Antibody, is suitable for studies of calcium transport, cardiac physiology, neuronal signaling, membrane transporter biology, and cellular calcium homeostasis.



NCX1 Antibody Human K562 Cell WB. Western blot analysis of human K562 cell lysate using NCX1 Antibody / Sodium Calcium Exchanger Antibody. Protein was detected with the primary antibody under reducing conditions. A prominent band is observed at approximately 125 kDa, which is consistent with the reported higher apparent molecular weight of glycosylated NCX1 despite a predicted molecular weight of approximately 105-108 kDa for the major isoforms. This NCX1 Antibody, also called Sodium Calcium Exchanger Antibody, is suitable for studies of calcium transport, cardiac physiology, neuronal signaling, membrane transporter biology, and cellular calcium homeostasis.

Description

NCX1 Antibody / Sodium Calcium Exchanger Antibody recognizes NCX1, the plasma membrane sodium-calcium exchanger encoded by the SLC8A1 gene. NCX1 is the principal sodium-calcium exchanger expressed in the heart and is also widely distributed throughout the brain, kidney, vascular smooth muscle, and numerous other tissues. By exchanging intracellular calcium for extracellular sodium, NCX1 plays a central role in maintaining calcium homeostasis and regulating cellular excitability. Because intracellular calcium influences muscle contraction, neurotransmitter release, secretion, and signal transduction, NCX1 is a key regulator of normal cellular physiology. An NCX1 Antibody is widely used to investigate calcium transport mechanisms and ion exchange in both normal and disease models.

The direction of calcium transport mediated by NCX1 depends on membrane potential and ion gradients, allowing the transporter to either extrude calcium from cells or promote calcium entry under specific physiological conditions. In cardiomyocytes, NCX1 is essential for calcium removal during relaxation, making it a critical determinant of excitation-contraction coupling and cardiac performance. In neurons, NCX1 contributes to calcium signaling, synaptic activity, and protection against calcium overload, while in smooth muscle and other tissues it helps regulate contraction, secretion, and cell survival. Consequently, NCX1 Antibody is valuable for studies of cardiovascular biology, neuroscience, renal physiology, and calcium-dependent signaling pathways.

Altered NCX1 expression or activity has been associated with numerous pathological conditions, including heart failure, cardiac hypertrophy, ischemia-reperfusion injury, hypertension, arrhythmias, stroke, and neurodegenerative disease. Dysregulated calcium homeostasis also contributes to metabolic disorders and abnormal cell survival, making NCX1 an important target for therapeutic research. Investigators frequently examine changes in NCX1 abundance, localization, and regulation to better understand disease mechanisms and evaluate pharmacological interventions that modulate calcium transport. The broad physiological importance of this exchanger has established it as one of the most extensively studied membrane transport proteins involved in calcium homeostasis.

NCX1 is commonly analyzed by Western blotting, immunohistochemistry, immunofluorescence, immunoprecipitation, flow cytometry, and related protein detection methods using heart and brain tissues or cultured cells that express endogenous protein. An NCX1 Antibody is a valuable research tool for detecting endogenous NCX1 expression and investigating calcium transport, sodium-calcium exchange, cardiac physiology, neuronal signaling, membrane transporter biology, and cellular calcium homeostasis.

Explore our Cardiovascular Marker Antibodies page to discover additional antibodies for investigating cardiac physiology, calcium homeostasis, ion transport, excitation-contraction coupling, and cardiovascular disease mechanisms.

Application Notes

Optimal dilution of the NCX1 Antibody / Sodium Calcium Exchanger Antibody should be determined by the researcher.

Immunogen

An E.coli-derived human recombinant protein (E301-Q686) was used as the immunogen for the NCX1 antibody.

Storage

After reconstitution, the NCX1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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