

Store at  
-20°C  
  
#79350

# NCX1 (D3F3H) Rabbit mAb



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R	Endogenous	110	Rabbit IgG	#P32418	6546

## Product Usage Information

### Application

Western Blotting

### Dilution

1:1000

## Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

## Specificity/Sensitivity

NCX1 (D3F3H) Rabbit mAb recognizes endogenous levels of total NCX1 protein.

## Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant protein corresponding to human NCX1 protein.

## Background

NCX1 (Na<sup>+</sup>/Ca<sup>2+</sup> exchanger, isoform 1) belongs to a conserved family of sodium-calcium membrane antiporter proteins that play a fundamental role in regulating intracellular calcium levels (1). NCX1 facilitates transmembrane transport of Ca<sup>2+</sup> ions in exchange for Na<sup>+</sup> ions in response to electrochemical gradients (2). Due to its relatively low affinity for calcium, NCX1 most commonly functions to export Ca<sup>2+</sup> under acute conditions of high intracellular Ca<sup>2+</sup>. Notably however, NCX1 is a reversible antiporter, and can thus facilitate Ca<sup>2+</sup> influx under specialized physiological circumstances (3). Research studies have shown that NCX1 is particularly important for regulating intracellular Ca<sup>2+</sup> levels in excitatory cell types (e.g., neurons, cardiac muscle). For example, conditional knockout of NCX1 in mouse cardiac pacemaker cells identified a critical role for NCX1 in the initiation and maintenance of cardiac rhythm (4).

## Background References

- Sharma, V. and O'Halloran, D.M. (2014) *Genesis* 52, 93-109.
- Yu, S.P. and Choi, D.W. (1997) *Eur J Neurosci* 9, 1273-81.
- Lytton, J. (2007) *Biochem J* 406, 365-82.
- Herrmann, S. et al. (2013) *Cardiovasc Res* 99, 780-8.

## Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

## Western Blot Buffer

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

## Applications Key

**W:** Western Blotting

## Cross-Reactivity Key

**H:** Human **M:** Mouse **R:** Rat

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