

The sodium-calcium exchanger (often denoted  $\text{Na}^+/\text{Ca}^{2+}$  exchanger, exchange protein, or NCX) is an antiporter membrane protein that removes calcium from cells. It uses the energy that is stored in the electrochemical gradient of sodium ( $\text{Na}^+$ ) by allowing  $\text{Na}^+$  to flow down its gradient across the plasma membrane in exchange for the countertransport of calcium ions ( $\text{Ca}^{2+}$ ). A single calcium ion is exported for the import of three sodium ions.

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The exchanger exists in many different cell types and animal species.

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The NCX is considered one of the most important cellular mechanisms for removing  $\text{Ca}^{2+}$ .

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