



# Na<sup>+</sup>/K<sup>+</sup>-ATPase $\alpha$ 3 (h): 293T Lysate: sc-158752

## BACKGROUND

The ubiquitously expressed sodium/potassium-ATPase (Na<sup>+</sup>/K<sup>+</sup>-ATPase) exists as an oligomeric plasma membrane complex that couples the hydrolysis of one molecule of ATP to the importation of three Na<sup>+</sup> ions and two K<sup>+</sup> ions against their respective electrochemical gradients. As a member of the P-type family of ion motives, Na<sup>+</sup>/K<sup>+</sup>-ATPase plays a critical role in maintaining cellular volume, resting membrane potential and Na<sup>+</sup>-coupled solute transport. Multiple isoforms of three subunits,  $\alpha$ ,  $\beta$  and  $\gamma$ , comprise the Na<sup>+</sup>/K<sup>+</sup>-ATPase oligomer. The  $\alpha$  subunit contains the binding sites for ATP and the cations; the glycosylated  $\beta$  subunit ensures correct folding and membrane insertion of the  $\alpha$  subunits. The small  $\gamma$  subunit co-localizes with the  $\alpha$  subunit in nephron segments, where it increases the affinity of Na<sup>+</sup>/K<sup>+</sup>-ATPase for ATP. The  $\beta$  subunit, but not the  $\gamma$  subunit, is essential for normal activity of Na<sup>+</sup>/K<sup>+</sup>-ATPase.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: ATP1A3 (human) mapping to 19q13.2.

## PRODUCT

Na<sup>+</sup>/K<sup>+</sup>-ATPase  $\alpha$ 3 (h): 293T Lysate represents a lysate of human Na<sup>+</sup>/K<sup>+</sup>-ATPase  $\alpha$ 3 transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## APPLICATIONS

Na<sup>+</sup>/K<sup>+</sup>-ATPase  $\alpha$ 3 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Na<sup>+</sup>/K<sup>+</sup>-ATPase  $\alpha$ 3 antibodies. Recommended use: 10-20  $\mu$ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.