MONOCLONAL ANTI-NA+/K+ ATPASE
(α1 SUBUNIT)
CLONE 9A-5
Mouse Ascites Fluid

Product Number A-275

Product Description
Monoclonal Anti- Na⁺/K⁺ ATPase (α1 Subunit) (mouse IgG1) is produced by immunizing mice with purified rat kidney Na⁺/K⁺ ATPase as the immunogen.

This antibody localizes the Na⁺/K⁺ ATPase α1 subunit in human, canine, rat and avian tissues. Can be used to affinity purify the α subunit of Na⁺/K⁺ ATPase and to inhibit enzyme activity.

The Na⁺/K⁺-ATPase is an integral membrane enzyme found in all cells of higher organisms and is responsible for the ATP-dependent transport of Na⁺ and K⁺ across the cell membrane. This membrane-bound enzyme is related to a number of other ATPases including the sarco(endo)plasmic reticulum Ca²⁺-ATPase (SERCA) and the plasma membrane Ca²⁺-ATPase (PMCA). The Na⁺/K⁺-ATPase consists of a large, multipass, transmembrane catalytic subunit, termed the α subunit, and an associated smaller glycoprotein, termed the beta subunit. Studies indicate that there are three isoforms of the alpha subunit (α1, α2, α3) and two isoforms of the beta subunit (β1 and β2) which are encoded by two multigene families.

The different isoforms of the Na⁺/K⁺-ATPase exhibit a tissue-specific and developmental pattern of expression. The α1 and beta mRNAs are present in all cell types examined whereas the α2 and α3 mRNAs exhibit a more restricted pattern of cell-specific expression. The α3 subunit has been found in neuronal and to a lesser extent skeletal and cardiac muscle and lung and stomach tissues.

Reagents
Monoclonal Anti- Na⁺/K⁺ ATPase (α1 Subunit) is supplied as mouse ascites diluted in phosphate buffered saline (PBS) containing 0.05% sodium azide as a preservative.

Precautions and Disclaimer
Due to the sodium azide content a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

Storage/Stability
For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile
Recommended starting titer for Monoclonal Anti-Na⁺/K⁺-ATPase (α1 subunit) is 1:1,000 by immunohistochemistry. This antibody can also be used for immunoprecipitation, however optimal titer should be determined by serial dilutions.
References

SMS 6/00