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Product Information

Monoclonal Anti-Dihydropyridine

Receptor ($\alpha 2$ Subunit)

Clone Number 20A

Mouse Ascites Fluid

Catalog Number **D219**

Product Description

Monoclonal Anti-Dihydropyridine (DHP) Receptor ($\alpha 2$ Subunit) (Mouse IgG2a) is produced by immunizing mice with purified rabbit DHP Receptors as the immunogen.

This antibody reacts with DHP Receptor ($\alpha 2$ subunit) in skeletal and cardiac muscle in rat, mouse, guinea pig and rabbit. Shows reactivity in rat brain and lung tissue, and weaker reactivity in rat kidney, liver and spleen tissues. In immunoblotting, it recognizes a 220 kDa band under nonreducing conditions, whereas reduction alters the migration to 143 kDa. In immunohistochemistry, double rows of discrete punctate staining representing pairs of triads on the opposing sides of the Z-lines are observed.

Voltage-sensitive calcium channels mediate the entry of calcium into many types of excitable cells and thus play a key role in neurotransmitter release and excitation-contraction (E-C) coupling. The 1,4-dihydropyridines (DHPs) are synthetic organic compounds which can be used to identify the L-type Ca^{2+} channels that are found in all types of vertebrate muscle, neuronal and neuroendocrine cells. The DHP Receptor is part of the L-type calcium channel complex and is thought to be the voltage sensor in E-C coupling. The purified DHP Receptor isolated from triads is composed of at least four subunits. The $\alpha 1$ subunit contains the binding site for the DHPs and shows high sequence homology to the voltage gated Na^+ channel. The $\alpha 2$ subunit is a large glycoprotein associated with the DHP Receptor which was first described in skeletal muscle and is also found in high concentrations in other excitable tissues such as cardiac muscle and brain, and in low concentrations in most other tissues studied. The other two subunits that copurify with the DHP Receptor are termed β and γ .

Reagent

The antibody is supplied as mouse ascites diluted with phosphate buffered saline and contains 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 -20°C for up to one month. For extended storage, solution may be frozen in working aliquots. Storage in "frost-free" freezers, or repeated freezing and thawing, is not recommended. If slight turbidity occurs upon prolonged storage, clarify by centrifugation before use.

Product Profile

Recommended starting titer is 1:500 for immunoblotting and 1:500 for immunohistochemistry. However, optimal working concentration should be determined by serial dilutions.

References

1. Flucher, B.E., et al., *Neuron* **5**, 339-351 (1990).
2. Morton, M.E., et al., *Neuron* **2**, 1499-1506 (1989).

MCT,PHC 07/05-1

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