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Product Information

Anti-α_{1D} Adrenergic Receptor
produced in rabbit, affinity isolated antibody

Catalog Number **A4354**

Product Description

Anti-α_{1D} Adrenergic Receptor is produced in rabbit using as immunogen a synthetic peptide conjugated to KLH. The peptide corresponds to the third cytoplasmic loop of human α_{1D} adrenergic receptor. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-α_{1D} Adrenergic Receptor specifically recognizes human α_{1D} adrenergic receptor in human vascular smooth muscle by immunohistochemistry with formalin-fixed, paraffin-embedded tissues. The immunizing peptide has 95% homology with the rat and mouse genes. Other species reactivity has not been confirmed.

α_1 adrenergic receptors are one of the three subfamilies of G protein coupled receptors activated by epinephrine and norepinephrine to control important functions in many target organs.[1] Once activated by binding, α_1 adrenergic receptors initiate the cellular pathways leading to the regulation of physiological effects, including blood pressure maintenance, glucose metabolism, renal sodium reabsorption, and cardiac inotropy.[2] Genes encoding three subtypes of human α_1 adrenergic receptor have been identified and are now called α_{1A}, α_{1B}, and α_{1D} since the clone originally called the α_{1C} has been found to correspond to the pharmacologically defined α_{1A} adrenergic receptor.[3,4]

Expression of the α_{1D} Adrenergic Receptor has been reported primarily in smooth muscle of arterioles, eye, gut, skin, vein, as well as in other cell types (e.g. salivary gland). They are also expressed in hippocampus, cerebral cortex, and brainstem.

Reagent

Supplied as a solution of 1 mg/ml in phosphate buffered saline containing 0.1% sodium azide as a preservative.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet 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, or 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

Immunohistochemistry: optimal dilution to be determined by researcher.

Note: In order to obtain best results and assay sensitivities of different techniques and preparations, we recommend determining optimal working dilutions by titration test.

References

1. Hague, C., et al., *Life Sci.*, **74.** 411-418 (2003).
2. Gonzalez-Cabrera, P.J., et al., *Mol. Pharmacol.*, **63**, 1104-1116 (2003).
3. Nathanson, N.M.**,** *Mol. Pharmacol.*, **63**, 959-960 (2003).
4. Hieble, I.P., et al., *Pharmacol. Rev.*, **47**, 267-270 (1995).

This product is manufactured by MBL International Corporation

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