

Product Information

Anti-B₁ Bradykinin Receptor

produced in rabbit, affinity isolated antibody

Catalog Number **B5560**

Product Description

Anti-B₁ Bradykinin Receptor is produced in rabbit using as immunogen a synthetic peptide corresponding to the third cytoplasmic loop of human B₁ Bradykinin Receptor, conjugated to KLH. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-B₁ Bradykinin Receptor specifically recognizes B₁ Bradykinin Receptor in human brain neurons by immunohistochemistry with formalin-fixed, paraffin-embedded tissues. The immunizing peptide has 88% homology with the mouse and rat genes. Other species reactivity has not been confirmed.

The nonapeptide Bradykinin (BK) is a member of the kinin family, proinflammatory peptides, and among the most potent and efficacious vasodilator agonists known.¹ Kinins act on two distinct receptors: B₂ and B₁ receptors. There is little B₁ Receptor expression in most healthy tissues, but its expression may be induced or enhanced by cytokines produced in inflammation. Expression has been reported in brain, colon, kidney, lung, nasal mucosa, pancreas, prostate, skin, spinal cord, and vessel. ESTs have been isolated from normal human connective tissue libraries and in human kidney and skin cancer libraries.

B₂ Receptor is constitutively expressed on various cell types, including endothelial cells, nerve fibers, leukocytes, and mast cells.² The effects of the kinins may be direct or associated with the stimulation of secondary mediators of inflammation, including prostanoids, tachykinins, cytokines, mast cell-derived products, and nitric oxide (NO).

Bradykinin can exert both negative and protective effects. Stimulation of B₂ Receptors is implicated in the pathogenesis of inflammation, pain and tissue injury. However, bradykinin can also exert cardioprotective

mechanisms through the vasorelaxant, anti-hypertrophic and anti-atherosclerotic endothelial mediators NO, prostaglandins and tissue-type plasminogen activator.³

In the central nervous system, kinins are known to induce neural tissue damage.⁴ The presence of bradykinin receptors has been noted on the glial astrocytes and oligodendrocytes, and recently on microglia as well.⁴

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

Store at -20 °C 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: recommended concentration 5-9 µg/mL. Optimal dilution to be determined by the 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. Kang, D.S., et al., *Mol. Pharmacol.*, **62**, 281-288 (2002).
2. Souza, D.G., et al., *J Immunol.*, **172**, 2542-2548 (2004).
3. Heitsch, H., *Expert Opin. Investig. Drugs*, **12**, 759-770 (2003).
4. Noda, M., *Neurochem. Int.*, **45**, 437-42 (2004).

This product is manufactured by MBL International Corporation

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