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Product Information

Anti-Endothelin Receptor B
produced in rabbit, affinity isolated antibody

Catalog Number **E2764**

Product Description

Anti-Endothelin Receptor B is produced in rabbit using a highly purified peptide CEMLRKKSGMQIALND ($ET\text{-}B_{298\text{-}313}$), corresponding to amino acid residues 298-313 of the rat ET-B endothelin receptor,[1-3]. The antibody was affinity isolated on immobilized $ET\text{-}B_{298\text{-}313}$.

Anti-Endothelin Receptor Type B recognizes the ET-B protein from rat brain membranes by immunoblotting.

The endothelins (ETs) are regulatory peptides that appear to be produced and active in almost all mammalian tissues.[4] In addition to being the most powerful vasonconstrictive substances known today, both *in vivo* and *in vitro,* they act as growth factors involved in fetal development and vascular regulation.[6] Much data support a pathophysiological role for ETs in diseases of the vascular system, such as hypertension, ischemic heart disease, and cerebral ischema,[5] as well as asmtha and renal failure.[8]

Endothelin-1 (ET-1) was first discovered and cloned in 1988.[5] Later, two other isoforms, differing from the original ET-1 in two or six residues, respectively, were cloned and named ET-2 and ET-3. All the members of the ET family contain 21 residues with two disulfide bridges.[4] Members of the ET family, which include vasoactive intestinal contractor (VIC),[6] are structurally similar to the sarafotoxins that are derived from *Atractaspis engaddensis* snake venom. Both groups act on the ET receptors.[6,7]

Two types of endothelin receptors have been cloned to date and are named ET_A and ET_B. The two classes are distinct in their ligand binding and distribution in tissues. ET_A has a stronger affinity to ET-1 (ET-1>ET-2>ET-3), while ET_B has an equal affinity towards all three ETs.[4] ET_A exists on smooth muscle and mediates vasoconstriction. In contrast, ET_B exists on endothelium and mediates the release of relaxing factors, such as nitric oxide and prostacycline.[4,7]

Both the ET_A and ET_B are G-protein-coupled receptors, consisting of extracellular N-termini, 7 trans-membrane domains, and intracellular C-termini. They share approximately 65% sequence identity, and both receptors activate different intra-cellular effector systems in the cell.[5]

The combined features of the two receptor subtypes and different intracellular signaling pathways modulate the broad physiological influence of the endothelins.[4,6]

Reagent

Supplied as a lyophilized powder at 0.8 mg/ml from phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin and 0.05% sodium azide.

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.

Preparation Instructions

Reconstitute the lyophilized vial with 0.05 mL or 0.2 mL deionized water, depending on the package size purchased. Antibody dilutions should be made in buffer containing 1% bovine serum albumin.

Storage/Stability

Prior to reconstitution, store at –20 °C. After reconstitution, the stock antibody solution may be stored at 2-8 °C for up to 2 weeks. 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

Immunoblotting: The recommended working dilution is 1:200 using Anti-Rabbit IgG-Peroxidase and detection by ECL.

Immunohistochemistry: The recommended working dilution is 1:100.

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

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ADM,PHC 09/11-1

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