

Product Information

Anti-Proteinase-Activated Receptor 2

produced in rabbit, affinity isolated antibody

Catalog Number **P8747**

Product Description

Anti-Proteinase-Activated Receptor 2 (PAR₂) is produced in rabbit using as immunogen a synthetic peptide conjugated to KLH. The peptide corresponds to the extracellular N-terminus of human proteinase-activated receptor 2. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Proteinase-Activated Receptor 2 specifically recognizes human proteinase-activated receptor 2 by immunohistochemistry with formalin-fixed, paraffin-embedded tissues. Not tested for other uses. The immunizing peptide has 60% homology with the mouse and rat genes. Other species reactivity has not been confirmed.

Proteinase-activated receptors (PARs) are G protein-coupled receptors that are activated by the cleavage of their N-terminal domain by proteinases. The proteolytic cleavage of the N-terminal region of PARs unmasks a new N-terminal sequence that acts as a tethered ligand that binds and activates the receptor itself. Four members of the PAR family have been cloned. PAR₁, PAR₃, and PAR₄ are activated by thrombin, and PAR₂ is activated by trypsin or by human mast cell tryptase.

PAR₂, also known as Coagulation Factor II Receptor-Like 1 (F2RL1), is known to play a critical role in acute and chronic inflammation. PAR₂ expression is substantially upregulated in inflamed tissues of the joint. Proinflammatory effects such as prolonged joint swelling and PAR₂ agonists also induce synovial hyperemia. PAR₂ activation could contribute to several early events in the inflammatory reaction, including leukocyte rolling, adherence, and recruitment, by a mechanism dependent on platelet activating factor release.

PAR₂ expression has been documented in the periphery. ESTs have been isolated from adrenal, brain, breast, heart/melanocyte/uterus, kidney, lung, and vessel libraries

Reagent

Supplied as a solution of 1 mg/mL in PBS, pH 7.7, containing 0.01% 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.

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. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunohistochemistry: a minimum working concentration of 3 µg/mL is determined using pancreatic tissues.

Note: In order to obtain the best results in various techniques and preparations, we recommend determining optimal working concentration by titration.

References

1. Nystedt, S., et al., Molecular cloning and functional expression of the gene encoding the human proteinase activated receptor 2., *Eur. J. Biochem.*, **232**, 84-89 (1995).
2. Ferrell, W. R., et al., Essential role for proteinase-activated receptor-2 in arthritis., *J. Clin. Invest.*, **111**, 35-41 (2003).
3. Fiorucci, S., et al., Proteinase-activated receptor 2 is an anti-inflammatory signal for colonic lamina propria lymphocytes in a mouse model of colitis., *Proc. Nat. Acad. Sci.*, **98**, 13936-13941 (2001).

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