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Lys-Bradykinin Protein
A Ligand of B2 Bradykinin G-Protein Coupled Receptor
Catalog # PG10015

Specification

Lys-Bradykinin Protein - Product Information

Lys-Bradykinin Protein - Additional Information

Storage
-20°C

Precautions
Lys-Bradykinin Protein is for research use only and not for use in diagnostic or therapeutic procedures.

Lys-Bradykinin Protein - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Lys-Bradykinin Protein - Images

Lys-Bradykinin Protein - Background

Kinins are small peptides rapidly produced following tissue injury that serve as important modulators of inflammation and pain. In the periphery, the actions of kinins include vasodilatation, increased vascular permeability, stimulation of immune cells, and induction of pain. Kinins in the central nervous system (CNS) appear to initiate a similar cascade of events leading to neural tissue damage as well as long lasting disturbances affecting blood-brain barrier function1.Kinins such as Bradykinin (BK), Lys-BK, desArg9-BK, and Lys-desArg9-BK exert their action via two distinct G protein-coupled receptors (GPCR): the B1 Bradykinin receptor (BKRB1) and the B2 Bradykinin receptor (BKRB2)2.Activation of BKRB2 liberates mediators of vascular tone, fibrinolysis, and pain. BKRB2, which mediates most of the physiological effects of kinins, as well as BKRB1, represent potential therapeutic targets for treatment of inflammatory disorders and cardiovascular diseases.Expression of BKRB1 is inducible upon various types of tissue injury and by inflammatory mediators such as bacterial lipopolysaccharide (LPS) and cytokines. A low level of expression of BKRB1 in the CNS of rodent and primates was recently demonstrated3. BKRB2 is constitutively and widely expressed throughout the CNS and peripheral nervous system and on various cell types including endothelial cells, nerve fibers, leukocytes, and mast cells3-5.Lys-Bradykinin is an endogenous nonspecific agonist for BKRB1and BKRB2, with some specificity towards the BKRB26.

Activation of Bradykinin receptors with Lys-Bradykinin may induce intracellular Ca2+elevation7. 100 nM Lys-Bradykinin induced Ca2+ transients in rat aortic endothelium cells (RAEC) (see figure here and review in reference #8).

Lys-Bradykinin Protein - References

1 . Walker, K. et al(1995)Neurochem. Int. 26, 1.2 . Bockmann, S. and Paegelow, I. (2000) J. Leukoc. Biol. 68, 587.3 . Hess, J.F. et al.(2004)J. Pharmacol. Exp. Ther.310, 488.4 . Souza, D.G. et al.(2004)J. Immunol. 172, 2542.5 . Calixto, J.B. et al.(2000)Pain87, 1.6 . Leeb-Lundberg, L. M. F. et al.(2005)Pharmacol. Rev.57,27.7 . Pallone, T. L. et al.(1998)Am. J. Physiol.274,H752.8 . Karaki, H. et al.(1998)Pharmacol. Rev.49,157.