Polyclonal Anti- Nitric Oxide Synthase 2, inducible NOS, ***NOS2*** **(Sepharose Bead Conjugate)**

Catalogue No. PA1330-S

Lot No. 0131012173064

Ig type: rabbit IgG

Size: 100µg/vial

Specificity

Human, rat. No cross reactivity with other proteins.

Recommended application

(Immunoprecipitation(IP)

Immunogen

A synthetic peptide corresponding to a sequence at the N-terminal of human NOS2 (3-24aa), different from the mouse sequence by eight amino acids.

Purification

Immunogen affinity purified.

Formulation

50% slurry in PBS pH 7.2 with 0.01mg NaN_3a_3 preservative.

Storage

Store at 4˚C for frequent use.

Description:

This Antagene antibody is immobilized via covalent binding of primary amino groups to N-hydroxysuccinimide (NHS)-activated sepharose beads. It is useful for immunoprecipitation assays

BACKGROUND

Nitric oxide synthase, inducible is an enzyme that in humans is encoded by the *NOS2* gene. Nitric oxide (NO) is a messenger molecule with diverse functions throughout the body. In the brain and peripheral nervous system, NO displays many properties of a neurotransmitter; it is implicated in neurotoxicity associated with stroke and neurodegenerative diseases, neural regulation of smooth muscle, including peristalsis, and penile erection. Three different NOS isoforms have been identified which fall into two distinct types, constitutive and inducible. The inducible NOS (iNOS) isoform is expressed in a variety of cell types and tissues in response to inflammatory agents and cytokines. The human iNOS (NOS2) gene is approximately 37 kb in length and consists of 26 exons and 25 introns. Diefenbach et al. (1999) studied the relationship of IL12 and nitric oxide synthase-2 (NOS2) to innate immunity to the parasite Leishmania in mice. And conclude that NOS2-derived NO is a prerequisite for cytokine signaling and function in innate immunity. From studies in Tanzania and Kenya, Hobbs et al. (2002) identified a novel single-nucleotide polymorphism, -1173C-T (163730.0001), in the NOS2 promoter that was significantly associated with protection from symptomatic malaria and severe malarial anemia.

REFERENCE

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2. Diefenbach, A., Schindler, H., Rollinghoff, M., Yokoyama, W. M., Bogdan, C. Requirement for type 2 NO synthase for IL-12 signaling in innate immunity. Science 284: 951-955, 1999.

3. Hobbs, M. R., Udhayakumar, V., Levesque, M. C., Booth, J., Roberts, J. M., Tkachuk, A. N., Pole, A., Coon, H., Kariuki, S., Nahlen, B. L., Mwaikambo, E. D., Lai, A. L., Granger, D. L., Anstey, N. M., Weinberg, J. B. A new NOS2 promoter polymorphism associated with increased nitric oxide production and protection from severe malaria in Tanzanian and Kenyan children. Lancet 360: 1468-1475, 2002.