eNOS (a.a. 1172-1181)

Blocking Peptide

Cat. # NX4125
Size 50 µg

Background

Nitric oxide (NO) has a broad range of biological activities and is implicated in signaling pathways in phylogenetically diverse species. Nitric oxide synthases (NOS), the enzymes responsible for synthesis of NO, are homodimers whose monomers are themselves two fused enzymes: a cytochrome reductase and a cytochrome that requires three cosubstrates (L-arginine, NADPH, and oxygen) and five cofactors or prosthetic groups (FAD, FMN, calmodulin, tetrahydrobiopterin, and heme). Several distinct NOS isoforms are produced from three distinct genes. The inducible form of NOS, iNOS (NOS-II), is Ca2+ independent and is expressed in a broad range of cell types, and two constitutive Ca2+/CaM-dependent forms of NOS: nNOS (bNOS, NOS-I) identified in neurons and eNOS (ecNOS, NOS-III) identified in endothelial cells. Regulation of eNOS activity occurs through phosphorylation at multiple sites. Phosphorylation of Ser -633 (mouse Ser-632) in the FMN binding domain increases eNOS activity and may be important for the maintenance of NO synthesis after initial activation by Ca2+ flux and Ser-1177 phosphorylation.

Background References

Musicki, B. et al. (2005) Proc. Natl. Acad. Sci.102(33):11870.
Mount, P.F. et al. (2007) J Mo.l Cell. Cardiol. 42(2):271.
Fisslthaler, B. et al. (2008) Circ Res. 102:1520.

Applications

Blocking	1:1000
ELISA	50 ng/well

End user should determine optimal dilution for their particular applications and experiments.
Western blot membranes were incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1 hour at room temperature.

Specificity

The peptide is specifically recognized by anti-eNOS (a.a. 1172-1181) antibody (NP4121) in ELISA, and has been shown to block the reactivity of NP4121 during Western blot. In addition, the peptide is recommended for use in blocking NP4121 reactivity in immunocytochemistry.

*All molecular weights (MW) are confirmed by comparison to Bio-Rad Rainbow Markers and to western blot mobilities of known proteins with similar MW.

Peptide Sequence

eNOS synthetic peptide corresponds to amino acids 1172 to 1181 in human eNOS. This sequence is conserved in rat and mouse eNOS.

Buffer and Storage

Blocking peptide is supplied in 50µl phosphate-buffered saline and 0.05% sodium azide.
Store at –20°C. Stable for 1 year.

Related Products

NM2211	eNOS (C-terminal region) Mouse Monoclonal
NP4121	eNOS (a.a. 1172-1181) Rabbit Polyclonal
NM2321	eNOS (Ser-632), phospho-specific Mouse Monoclonal
NP4031	eNOS (Tyr-657)/nNOS (Tyr-895), phospho-specific Rabbit Polyclonal
NP4051	eNOS (Ser-1177), phospho-specific Rabbit Polyclonal

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