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Anti-eNOS (Tyr-657)/nNOS (Tyr-895), Phosphospecific Antibody

Catalog # AN1865

Product Information

Application	WB, ICC
Primary Accession	P29474
Host	Rabbit
Clonality	Rabbit Polyclonal
Isotype	IgG
Calculated MW	133275

Additional Information

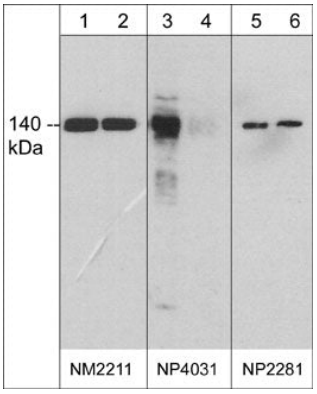
Gene ID	4846
Other Names	endothelial Nitric Oxide Synthase, eNOS, ecNOS, NOS-III, NOS3, NOSIII
Dilution	WB~~1:1000 ICC~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Anti-eNOS (Tyr-657)/nNOS (Tyr-895), Phosphospecific Antibody is for research use only and not for use in diagnostic or therapeutic procedures.
Shipping	Blue Ice

Background

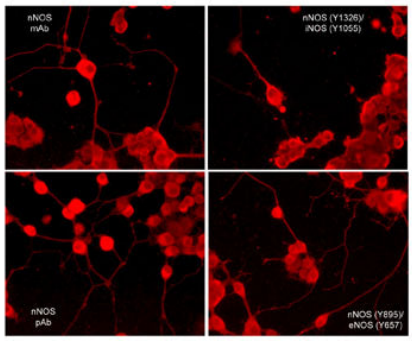
Nitric oxide (NO) has a broad range of biological activities and is implicated in signaling pathways in phylogenetically diverse species. Nitric oxide synthases (NOS), the enzymes responsible for synthesis of NO, are homodimers whose monomers are themselves two fused enzymes: a cytochrome reductase and 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.

Images

Western blot analysis of human umbilical vein endothelial cells stimulated with pervanadate (1 mM) for 30 min.



(lanes 1, 3, & 5) then the blot was treated with alkaline phosphatase (lanes 2, 4, & 6). The blots were probed with anti-eNOS monoclonal antibody (NM2211; lanes 1 & 2), anti-eNOS (Tyr-657) phospho-specific antibody (AN1865; lanes 3 & 4), or anti-eNOS polyclonal antibody (NP2281; lanes 5 & 6).



Immunocytochemical labeling of nNOS phosphorylation in rat PC12 cells differentiated with NGF. The cells were probed with mouse monoclonal (mAb) nNOS (NM4011), and rabbit polyclonal (pAb) nNOS (C-terminal region), nNOS (Tyr-895)/eNOS (Tyr-657), and nNOS (Tyr-1326)/iNOS (Tyr-1055). The antibodies were detected using appropriate secondary antibody conjugated to DyLight® 594.