

nNOS (phospho-Ser1417) Polyclonal Antibody

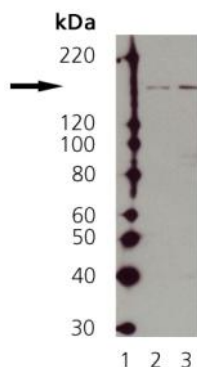
Product Specifications	
Catalog Number:	KAP-NO032
Source:	Rabbit
Species Reactivity:	Human Other species not tested. Predicted to react with rat, mouse, rabbit and <i>Xenopus</i> based on 100% sequence homology.
Applications:	WB: 1:500 (ECL) Other applications not tested. <i>The optimal dilution for a specific application must be determined by the investigator</i>
Predicted M.W.:	~ 155 kDa
Concentration:	See product label
Purification:	Peptide Affinity
Format:	PBS, pH 7.2, 0.09% azide, 50% glycerol
Storage:	Store at -20°C <i>Shipping conditions may differ from the recommended storage temperature</i>
Immunogen:	Synthetic phospho-peptide derived from the sequence near the carboxy-terminus of human nNOS
Related Products:	
NEW! KAP-NO030	nNOS Polyclonal Antibody
NEW! KAP-NO020	eNOS Polyclonal Antibody
SAB-300	Goat anti-Rabbit IgG Polyclonal Antibody, HRP Conjugate
917-020	Nitric Oxide (total) Detection Kit

Background:

The diffusible free radical gas nitric oxide (NO) affects a variety of physiological functions, and acts as a key regulator of the cardiovascular, nervous, and immune systems¹⁻². NO is synthesized in many tissues from L-arginine, oxygen, and NADPH by three known isoforms of a heme-containing flavoprotein termed NO synthase (nNOS/NOS-I, iNOS/NOS-II, and eNOS/NOS-III)³⁻⁵. nNOS is a constitutively expressed neuronal NOS isoform that exists in its latent form until activated by the binding of calmodulin following elevation of intracellular calcium levels³. The C-terminus of nNOS contains a conserved serine residue, Ser1417, analogous to Ser1177 of the constitutively expressed endothelial NOS isoform (eNOS). Phosphorylation of Ser1417 is believed to regulate nNOS activation, particularly in glucose-sensing neurons, where inhibition of AMPK pathways by glucose and leptin serve to suppress nNOS activity, whereas activation of AMPK by insulin leads to nNOS activation⁶.

References:

1. Marletta, M. (1994) *Cell* **78**, 927-930.
2. Nathan, C., *et al.* (1994) *Cell* **78**, 915-918.
3. Bredt, D.S., *et al.* (1991) *Nature* **351**, 714-718.
4. Lamas, S., *et al.* (1992) *Proc Nat Acad Sci USA*. **89**, 6348-6352.
5. Xie, Q., *et al.* (1992) *Science* **256**, 225-228.
6. Canabal, D.D., *et al.* (2007) *Am J Physiol Regulatory Integrative Comp Physiol*. **292**, R1418-R1428.



Western Blot Analysis: Lane 1: MWM, Lane 2: SK-N-SH Cell Lysate, Lane 3: SK-N-SH + Nocodazole Cell Lysate

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