

BACKGROUND

Endothelial Nitric Oxide Synthase (eNOS), also called NOS3, along with inducible Nitric Oxide Synthase (iNOS) and neuronal Nitric Oxide Synthase (nNOS), catalyze the generation of Nitric Oxide (NO) and L-citrulline from L-arginine and molecular oxygen. NO is a reactive free radical which acts as a biologic mediator in several processes, including neurotransmission and antimicrobial and antitumoral activities. NO also is implicated in vascular smooth muscle relaxation through a cGMP-mediated signal transduction pathway and mediates vascular endothelial growth factor (VEGF)-induced angiogenesis in coronary vessels, and promotes blood clotting through the activation of platelets.¹

eNOS is activated at concentrations of calcium greater than 100 nM and requires tetrahydrobiopterin, flavin adenine dinucleotide, flavin mononucleotide and NADPH for catalytic activity. eNOS is tightly regulated by co- and post-translational lipid modifications, phosphorylation by Akt/PKB, PKA and AMPK and protein-protein interactions.² Negative protein-protein interactions are mediated by Hsp90 and Cav-1 in the Golgi and by NOSIP and NOSTRIN at the plasma membrane, whilst dynamin, porin and soluble guanylyl cyclase are positive regulators of eNOS activity. eNOS is a critical mediator of cardiovascular homeostasis through regulation of the diameter of blood vessels and maintenance of an antiproliferative and antiapoptotic environment in the vasculature.³ The human gene encoding eNOS is localized to chromosome 7q36.

References:

1. Goligorsky, M.S. et al: Am. J. Physiol. Renal. Physiol. 283:F1-F10, 2002
2. Mount, P.F. et al: J.Mol. Cell. Cardiol. 42:271-79, 2007
3. Förstermann, U. & Münzel, M.: Circulation 113:1078-14, 2006

TECHNICAL INFORMATION

Source:

eNOS antibody is a mouse monoclonal antibody raised against purified recombinant human eNOS fragments expressed in *E. coli*.

Specificity and Sensitivity:

This antibody detects endogenous eNOS proteins without cross-reactivity with other family members.

Storage Buffer: PBS and 30% glycerol

Storage:

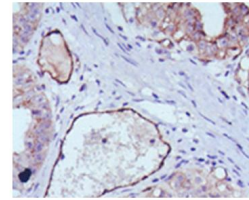
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

APPLICATIONS

Application:	*Dilution:
WB	1:1000
IP	1:50
IHC	1:200
ICC	1:50
FACS	1:50

*Optimal dilutions must be determined by end user.

QUALITY CONTROL DATA



Immunohistochemical staining of paraffin-embedded human ovary carcinoma tissue using eNOS3 Antibody.

