ARG20524
anti-eNOS phospho (Ser1177) antibody

Package: 50 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes eNOS phospho (Ser1177)
Tested Reactivity	Hu, Ms, Rat
Tested Application	ELISA, WB
Specificity	The antibody detects a ~140 kDa band corresponding to eNOS on SDS-PAGE immunoblots of human umbilical vein endothelial cells grown normally or treated with calyculin A. This reactivity is not observed after lambda phosphatase treatment.
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	eNOS
Species	Human
Immunogen	Synthetic peptide (coupled to carrier protein) around Ser1177 of Human eNOS. This sequence is conserved in rat and mouse eNOS.
Conjugation	Un-conjugated
Alternate Names	Constitutive NOS; NOS type III; Nitric oxide synthase, endothelial; Endothelial NOS; eNOS; EC-NOS; NOSIII; cNOS; EC 1.14.13.39; ECNOS

Application Instructions

Application table

Application	Dilution
ELISA	1:2000
WB	1:1000

Application Note: WB: Antibody is suggested to be diluted in 5% skimmed milk/Tris buffer with 0.04% Tween20 and incubated for 1 hour at room temperature.
* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

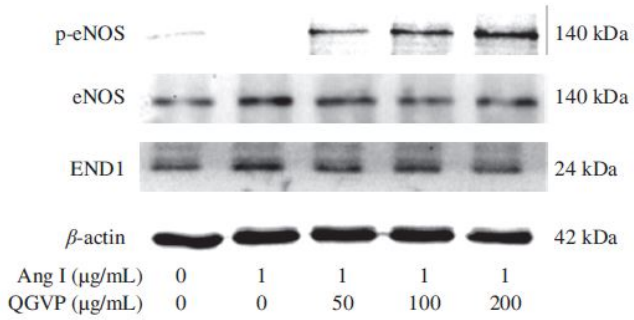
Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	PBS, 50% glycerol, 1 mg/ml BSA, and 0.05% Sodium azide
Preservative	0.05% Sodium azide
Stabilizer	1 mg/ml BSA
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw

	cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	NOS3
Gene Full Name	nitric oxide synthase 3 (endothelial cell)
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, inducible NOS (iNOS, NOS-II), neuronal NOS (bNOS, NOS-I), and endothelial NOS (eNOS, ecNOS, NOS-III). 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. Tyr-657 is phosphorylated by PYK2 in response to fluid shear stress and this phosphorylation leads to attenuation of enzyme activity.
Function	Produces nitric oxide (NO) which is implicated in vascular smooth muscle relaxation through a cGMP-mediated signal transduction pathway. NO mediates vascular endothelial growth factor (VEGF)-induced angiogenesis in coronary vessels and promotes blood clotting through the activation of platelets. Isoform eNOS13C: Lacks eNOS activity, dominant-negative form that may down-regulate eNOS activity by forming heterodimers with isoform 1. [UniProt]
Highlight	Related Antibody Duos and Panels: ARG30247 Phospho eNOS Antibody Duo (Total, pY1177) Related products: eNOS antibodies; eNOS ELISA Kits; eNOS Duos / Panels; Anti-Rabbit IgG secondary antibodies;
Research Area	Cancer antibody; Cell Biology and Cellular Response antibody; Metabolism antibody; Neuroscience antibody
Calculated Mw	133 kDa
PTM	Phosphorylation by AMPK at Ser-1177 in the presence of Ca(2+)-calmodulin (CaM) activates activity. In absence of Ca(2+)-calmodulin, AMPK also phosphorylates Thr-495, resulting in inhibition of activity (By similarity). Phosphorylation of Ser-114 by CDK5 reduces activity.

Images



ARG20524 anti-eNOS phospho (Ser1177) antibody WB image

Western blot: Human endothelial cell stained with ARG20524 anti-eNOS phospho (Ser1177) antibody and ARG40666 anti-mTOR phospho (Ser2448) antibody .

From Qiang Wu et al. Food Science and Human Wellness. (2022), doi: 10.1016-j-fshw-2022-06-023, Fig. 5. F.

ARG20524 anti-eNOS phospho (Ser1177) antibody WB image

Western blot: 1) and 2) calyculin A (100 nM) treated Human umbilical vein endothelial cells for 30 min, 2) then the blots were treated with lambda phosphatase. The blots were stained with ARG20524 anti-eNOS phospho (Ser1177) antibody.