



Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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Phospho-eNOS (Ser113) Antibody

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W	Reactivity: H B	Sensitivity: Endogenous	MW (kDa): 140	Source/Isotype: Rabbit	UniProt ID: #P29474	Entrez-Gene Id: 4846
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Product Usage Information

Application

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Phospho-eNOS (Ser113) Antibody detects endogenous levels of eNOS only when phosphorylated at serine 113.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser113 of human eNOS. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Endothelial nitric-oxide synthase (eNOS) is an important enzyme in the cardiovascular system. It catalyzes the production of nitric oxide (NO), a key regulator of blood pressure, vascular remodeling, and angiogenesis (1,2). The activity of eNOS is regulated by phosphorylation at multiple sites. The two most thoroughly studied sites are the activation site Ser1177 and the inhibitory site Thr495 (3). Several protein kinases including Akt/PKB, PKA, and AMPK activate eNOS by phosphorylating Ser1177 in response to various stimuli (4,5). In contrast, bradykinin and H₂O₂ activate eNOS activity by promoting both Ser1177 phosphorylation and Thr495 dephosphorylation (6,7). eNOS is activated by VEGF, and this activation is associated with dephosphorylation of eNOS at serine 113. Cyclosporin A blocks this dephosphorylation of eNOS upon VEGF stimulation (8).

Background References

1. Fulton, D. et al. (2001) *J Pharmacol Exp Ther* 299, 818-24.
2. Shaul, P.W. (2002) *Annu Rev Physiol* 64, 749-74.
3. Chen, Z.P. et al. (1999) *FEBS Lett* 443, 285-9.
4. Dimmeler, S. et al. (1999) *Nature* 399, 601-5.
5. Fulton, D. et al. (1999) *Nature* 399, 597-601.
6. Harris, M.B. et al. (2001) *J Biol Chem* 276, 16587-91.
7. Thomas, S.R. et al. (2002) *J Biol Chem* 277, 6017-24.
8. Kou, R. et al. (2002) *J Biol. Chem.* 277(33) , 29669-29673.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **B:** Bovine

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