bs-2072R **[Primary Antibody]**

iNOS Rabbit pAb

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DATASHEET

Host: Rabbit **Isotype:** IgG

Clonality: Polyclonal

GeneID: 18126 **SWISS:** P29477

Target: iNOS

Immunogen: KLH conjugated synthetic peptide derived from mouse NOS-2: 14-100/1144.

Purification: affinity purified by Protein A

Concentration: 1mg/ml

Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

Background: Nitric oxide (NO) is an inorganic, gaseous free radical that carries a variety of messages between cells. Vasorelaxation, neurotransmission and cytotoxicity can all be potentiated through cellular response to NO. NO production is mediated by members of the nitric oxide synthase (NOS) family. NOS catalyzes the oxidization of L-arginine to produce L-citrulline and NO. Two constitutive isoforms, brain or neuronal NOS (b or nNOS, type I) & endothelial cell NOS (eNOS, type III), and one inducible isoform (iNOS, type II), have been cloned. All NOS isoforms contain calmodulin, nicotinamide adenine dinucleotide phosphate (NADPH), flavin adenine dinucleotide (FAD), and flavin mononucleotide (FMN) binding domains. Nitric oxide synthase is expressed in liver, macrophages, hepatocytes, synoviocytes, stimulated glial cells and smooth muscle cells. Cytokines such as interferon-gamma (IFN), tumor necrosis factor (TNF), interleukin-1 and -2, and lipopolysaccarides (LPS) cause an increase in iNOS mRNA, protein, and activity levels. Protein kinase C-stimulating agents exhibit the same effect on iNOS activity. After cytokine induction, iNOS exhibits a delayed activity response which is then followed by a significant increase in NO production over a long period of time. Human iNOS is regulated by calcium/calmodulin (in contrast with mouse NOS2).

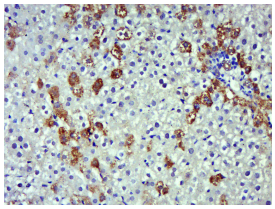
Applications: **IHC-P** (1:400-800)
IHC-F (1:400-800)
IF (1:100-500)

Reactivity: Rat (predicted: Mouse, Rabbit)

Predicted MW.: 130 kDa

Subcellular Location: Cytoplasm

VALIDATION IMAGES



Paraformaldehyde-fixed, paraffin embedded (Rat liver); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (iNOS) Polyclonal Antibody, Unconjugated (bs-2072R) at 1:500 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.

SELECTED CITATIONS

- **[IF=18]** Jiaqi Zhou. et al.Immune-modulated adhesive hydrogel for enhancing osteochondral graft adhesion and cartilage repair..Bioactive Materials.2025 Mar 1:49:23-38. IF ;Mouse. 40110583
- **[IF=18]** Li, Danmei. et al. Restoring tendon microenvironment in tendinopathy: Macrophage modulation and tendon regeneration with injectable tendon hydrogel and tendon-derived stem cells exosomes. BIOACT MATER. 2025 Jan22;47:152–169 IHC ;rabbit. 39906648
- **[IF=13.281]** Yang Sun. et al. Dual Biosignal-Functional Injectable Microspheres for Remodeling Osteogenic Microenvironment. SMALL. 2022 Apr 14 IHC ;Rabbit. 35419952
- **[IF=13.3]** Yan Shi. et al. Relieving Macrophage Dysfunction by Inhibiting SREBP2 Activity: A Hypoxic Mesenchymal Stem Cells-Derived Exosomes Loaded Multifunctional Hydrogel for Accelerated Diabetic Wound Healing. SMALL. 2024 Jan;:2309276 FCM ;Mouse. 38247194
- **[IF=10.7]** Lin Gan. et al. Chondroitin sulfate modulates oxidative stress and inflammation in the substantia nigra via gut microbiota regulation: Mechanistic insights into Parkinson's disease treatment. CARBOHYD POLYM. 2024 Oct;:122874 WB ;Mouse. 10.1016/j.carbpol.2024.122874