

## DESCRIPTION

<b>Species Reactivity</b>	Human/Mouse/Rat
<b>Specificity</b>	Detects human, mouse, and rat nNOS in Western blots. In direct ELISAs, this antibody shows approximately 5% cross-reactivity with recombinant human eNOS.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>S. frugiperda</i> insect ovarian cell line Sf21-derived recombinant human nNOS Ser218-Ser1434 Accession # P29475
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

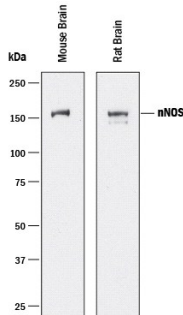
## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
<b>Western Blot</b>	1 µg/mL	See Below
<b>Immunohistochemistry</b>	1-15 µg/mL	See Below
<b>Simple Western</b>	10 µg/mL	See Below

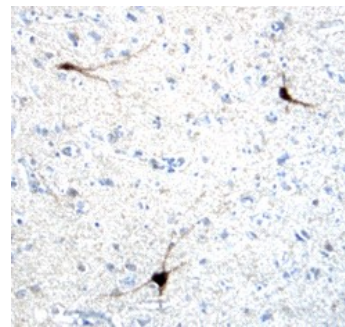
## DATA

### Western Blot



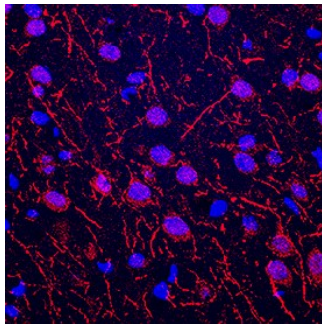
**Detection of Mouse and Rat nNOS by Western Blot.** Western blot shows lysates of mouse brain tissue and rat brain tissue. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human/Mouse/Rat nNOS Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2416) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for nNOS at approximately 160 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

### Immunohistochemistry



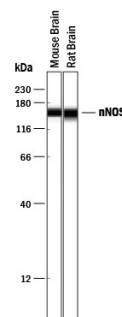
**nNOS in Human Brain.** nNOS was detected in immersion fixed paraffin-embedded sections of human brain (cortex) using 1.7 µg/mL Goat Anti-Human/Mouse/Rat nNOS Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2416) overnight at 4 °C. Tissue was stained with the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific labeling was localized to the cytoplasm of astrocytes in the cortex. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

### Immunohistochemistry



**nNOS in Rat Brain.** nNOS was detected in immersion fixed frozen sections of rat brain (cortex) using Goat Anti-Human/Mouse/Rat nNOS Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2416) at 5 µg/mL overnight at 4 °C. Tissue was stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to neurons and neuronal processes. View our protocol for [Fluorescent IHC Staining of Frozen Tissue Sections](#).

### Simple Western



**Detection of Mouse and Rat nNOS by Simple Western™.** Simple Western lane view shows lysates of mouse brain tissue and rat brain tissue, loaded at 0.2 mg/mL. A specific band was detected for nNOS at approximately 160 kDa (as indicated) using 10 µg/mL of Goat Anti-Human/Mouse/Rat nNOS Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2416) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

nNOS is one of three NOS enzymes that catalyze the oxidation of L-arginine to L-citrulline and nitric oxide. nNOS exists as homodimers containing a cytochrome P450-like prosthetic heme group in the N-terminal half. It also has a tightly bound FAD and FMN group in the C-terminal half. At least 4 isoforms of human nNOS are known. Human nNOS shares about 55% amino acid sequence identity with eNOS and iNOS. It also shares 96% sequence identity with mouse or rat nNOS.