

**DESCRIPTION**

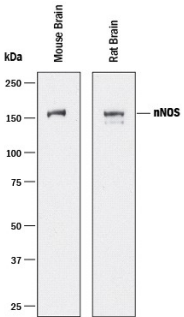
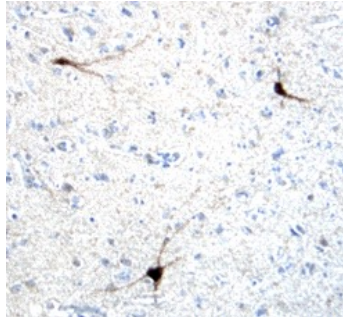
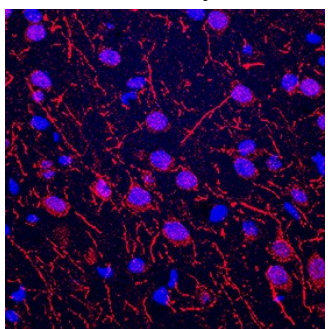
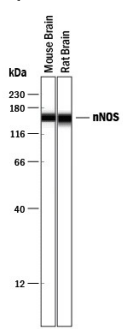

|                           |   |
|---------------------------|---|
| <b>Species Reactivity</b> | Human/Mouse/Rat   |
| <b>Specificity</b>        | Detects human, mouse, and rat nNOS in Western blots. In direct ELISAs, this antibody shows approximately 5% cross-reactivity with recombinant human eNOS.   |
| <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<br>Accession # P29475  |
| <b>Formulation</b>        | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied either lyophilized or 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.

|                             | <b>Recommended Concentration</b> | <b>Sample</b> |
|-----------------------------|----------------------------------|---------------|
| <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**

|  |   |
|--|---|
| <p><b>Western Blot</b></p>  <p><b>Detection of Mouse and Rat nNOS by Western Blot.</b> 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.</p>                                     | <p><b>Immunohistochemistry</b></p>  <p><b>nNOS in Human Brain.</b> 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 &amp; 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 <a href="#">Chromogenic IHC Staining of Paraffin-embedded Tissue Sections</a>.</p>  |
| <p><b>Immunohistochemistry</b></p>  <p><b>nNOS in Rat Brain.</b> 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 <a href="#">Fluorescent IHC Staining of Frozen Tissue Sections</a>.</p> | <p><b>Simple Western</b></p>  <p><b>Detection of Mouse and Rat nNOS by Simple Western™.</b> 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.</p>  |

**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.<br>*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.