

## DESCRIPTION

|                                                                                                                                                                                                         |                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human                                                                                 |
| <b>Specificity</b>                                                                                                                                                                                      | Detects human NOX4 in direct ELISAs.                                                  |
| <b>Source</b>                                                                                                                                                                                           | Monoclonal Mouse IgG <sub>2A</sub> Clone # 996715                                     |
| <b>Purification</b>                                                                                                                                                                                     | Protein A or G purified from hybridoma culture supernatant                            |
| <b>Immunogen</b>                                                                                                                                                                                        | <i>E. coli</i> -derived recombinant human NOX4<br>Lys450-Ser578<br>Accession # Q9NPH5 |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 488<br>Excitation Wavelength: 488 nm<br>Emission Wavelength: 515-545 nm   |
| <b>Formulation</b>                                                                                                                                                                                      | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide                          |
| *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |                                                                                       |

## 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>Immunocytochemistry</b>  | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunohistochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

## PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

## BACKGROUND

NADPH Oxidase 4/NOX4, also known as Renal NADPH Oxidase/RENOX and Kidney Oxidase 1/KOX1, is a 66 to 75 kDa member of the NOX family of NADPH oxidases. NOX family members are a major source of reactive oxygen species (ROS), including hydrogen peroxide and superoxide, and are critical mediators of redox signaling. NOX4 is strongly expressed in the kidney, especially in the proximal convoluted tubule cells of the renal cortex, and may function as an oxygen sensor that regulates the synthesis of erythropoietin. Expression is also high in endothelial cells, and because aortas from deficient mice exhibit increased inflammation, hypertrophy and endothelial dysfunction, NOX4 may function to protect the vasculature during ischemic or inflammatory stress. Human NOX4 is 578 amino acids (aa) in length, with several additional smaller isoforms identified. Over aa 450-578, human NOX4 has 92% sequence identity with mouse NOX4, and 91% identity with rat NOX4.

## PRODUCT SPECIFIC NOTICES

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