

NOX4 Antibody

Purified Mouse Monoclonal Antibody

Catalog # AO2017a

Product Information

| | |
|--------------------------|--|
| Application | WB, IHC, FC, ICC, E |
| Primary Accession | Q9NPH5 |
| Reactivity | Human |
| Host | Mouse |
| Clonality | Monoclonal |
| Clone Names | 3H2G11 |
| Isotype | IgG1 |
| Calculated MW | 66932 |
| Description | This gene encodes a member of the NOX-family of enzymes that functions as the catalytic subunit the NADPH oxidase complex. The encoded protein is localized to non-phagocytic cells where it acts as an oxygen sensor and catalyzes the reduction of molecular oxygen to various reactive oxygen species (ROS). The ROS generated by this protein have been implicated in numerous biological functions including signal transduction, cell differentiation and tumor cell growth. A pseudogene has been identified on the other arm of chromosome 11. Alternative splicing results in multiple transcript variants. |
| Immunogen | Purified recombinant fragment of human NOX4 (AA: 210-310) expressed in E. Coli. |
| Formulation | Purified antibody in PBS with 0.05% sodium azide |

Additional Information

| | |
|--------------------|--|
| Gene ID | 50507 |
| Other Names | NADPH oxidase 4, 1.6.3.-, Kidney oxidase-1, KOX-1, Kidney superoxide-producing NADPH oxidase, Renal NAD(P)H-oxidase, NOX4, RENOX |
| Dilution | WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 ICC~~N/A E~~1/10000 |
| Storage | Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| Precautions | NOX4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures. |

Protein Information

| | |
|--------------------------|--|
| Name | NOX4 |
| Synonyms | RENOX |
| Function | NADPH oxidase that catalyzes predominantly the reduction of oxygen to H ₂ O ₂ (PubMed: 14966267 , PubMed: 15356101 , PubMed: 15927447 , PubMed: 21343298 , PubMed: 25062272). Can also catalyze to a smaller extent, the reduction of oxygen to superoxide (PubMed: 10869423 , PubMed: 11032835 , PubMed: 15155719 , PubMed: 15572675 , PubMed: 15927447 , PubMed: 16019190 , PubMed: 16179589 , PubMed: 16230378 , PubMed: 16324151 , PubMed: 25062272). May function as an oxygen sensor regulating the KCNK3/TASK-1 potassium channel and HIF1A activity (PubMed: 16019190). May regulate insulin signaling cascade (PubMed: 14966267). May play a role in apoptosis, bone resorption and lipopolysaccharide-mediated activation of NFκB (PubMed: 15356101 , PubMed: 15572675). May produce superoxide in the nucleus and play a role in regulating gene expression upon cell stimulation (PubMed: 16324151). Promotes ferroptosis, reactive oxygen species production and reduced glutathione (GSH) levels by activating NLRP3 inflammasome activation and cytokine release (PubMed: 39909992). |
| Cellular Location | Cytoplasm. Endoplasmic reticulum membrane; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein. Cell junction, focal adhesion {ECO:0000250 UniProtKB:Q924V1}. Nucleus [Isoform 3]: Cytoplasm. Cytoplasm, perinuclear region [Isoform 6]: Cytoplasm. Cytoplasm, perinuclear region |
| Tissue Location | Expressed by distal tubular cells in kidney cortex and in endothelial cells (at protein level). Widely expressed. Strongly expressed in kidney and to a lower extent in heart, adipocytes, hepatoma, endothelial cells, skeletal muscle, brain, several brain tumor cell lines and airway epithelial cells |

References

Stem Cells Dev. 2012 Aug 10;21(12):2212-21.Cancer Biol Ther. 2010 Aug 1;10(3):223-31.

Images

