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NOX3 Antibody
Catalog # ASC11834

Specification

NOX3 Antibody - Product Information

Application	**WB, IHC, IF**
Primary Accession	Q9HBY0
Other Accession	NP_056533, 11136626
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 62 kDa** **Observed: 72 kDa KDa**
Application Notes	**NOX3 antibody can be used for detection of NOX3 by Western blot at 1 - 2 µg/ml. Antibody can also be used for Immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.**

NOX3 Antibody - Additional Information

Gene ID **50508**

Target/Specificity
NOX3; NOX3 antibody is human and mouse reactive. NOX3 is predicted to not cross-react with other NOX proteins.

Reconstitution & Storage
NOX3 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.

Precautions
NOX3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

NOX3 Antibody - Protein Information

Name NOX3

Synonyms MOX2

Function
NADPH oxidase that catalyzes the generation of superoxide from molecular oxygen utilizing NADPH as an electron donor, upon formation of a complex with CYBA/p22phox (PubMed:15181005, PubMed:15824103). Plays a role in the biogenesis of otoconia/otolith, which are crystalline structures of the inner ear involved in the perception of gravity (By similarity).

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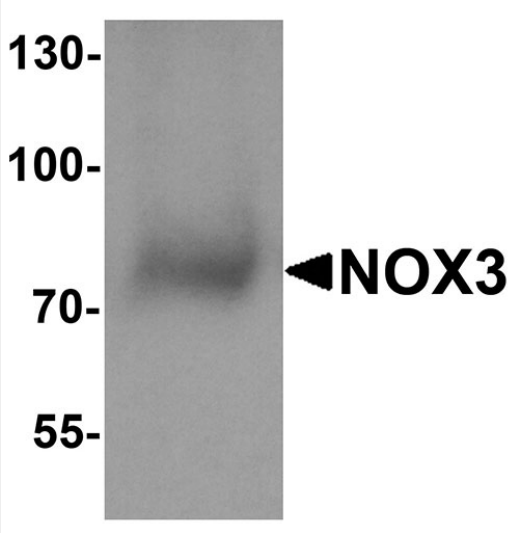
Cellular Location
Cell membrane {ECO:0000250|UniProtKB:Q672J9}; Multi-pass membrane protein

NOX3 Antibody - Protocols

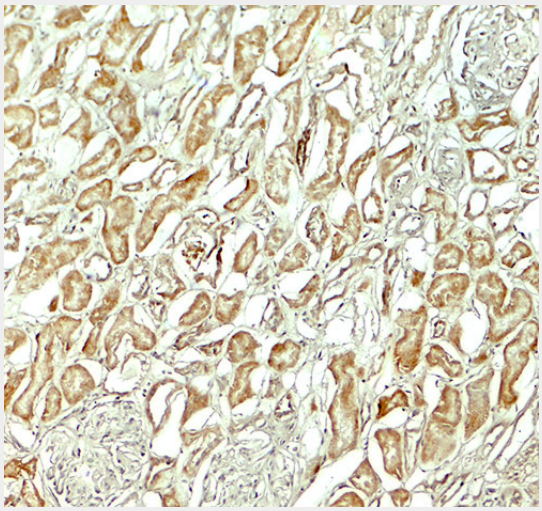
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

NOX3 Antibody - Images

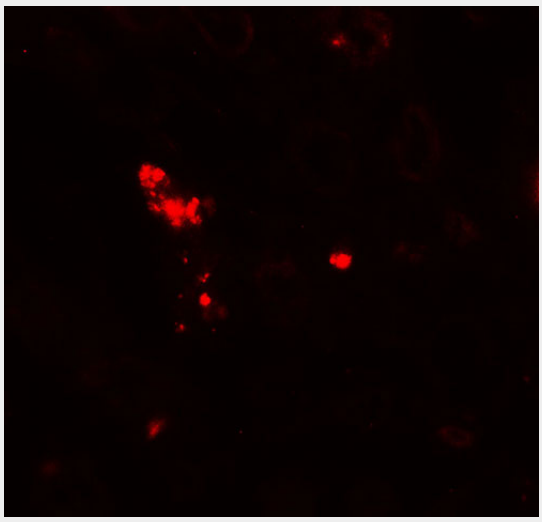


Western blot analysis of NOX3 in 293 cell lysate with NOX1 antibody at 1 µg/ml.



Immunohistochemistry of NOX3 in human kidney tissue with NOX3 antibody at 5 µg/ml.

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Immunofluorescence of NOX3 in human kidney tissue with NOX3 antibody at 20 µg/ml.

NOX3 Antibody - Background

The NOX family of NAPDH oxidases is comprised of seven transmembrane proteins that oxidize intracellular NAPDH/NADH, causing electron transport across the membrane and the reduction of molecular oxygen to superoxide (1). NOX3 is expressed predominantly in the inner ear and is involved in the biogenesis of otoconia/otolith (2,3). It has been suggested that NOX3 is activated by the Transient Receptor Potential Vanilloid 1 (TRPV1), and this activity causes increased levels of reactive oxygen species in the inner ear, which in turn leads to STAT1-mediated inflammation and hearing loss (4).

NOX3 Antibody - References

Bedard K and Krause KH. The Nox family of ROS-generating NAPDH oxidases: physiology and pathophysiology. Physiol. Rev. 2007; 87:245-313.
Cheng G, Cao Z, Xu X, et al. Homologs of gp91phox: cloning and tissue expression of Nox3, Nox4, and Nox5. Gene 2001; 269:131-40.
Paffenholz R, Bergstrom RA, Pasutto F, et al. Vestibular defects in head-tilt mice result from mutations in Nox3, encoding an NADPH oxidase. Genes Dev. 2004; 18:486-91.
Mukherjea, Jajoo S, Sheehan K, et al. NOX3 NADPH oxidase couples transient receptor potential vanilloid 1 to signal transducer and activator of transcription 1-mediated inflammation and hearing loss. Antioxidants and Redox Signaling 2011; 14:999-1010.