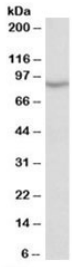
NOX5 Antibody (R34044)

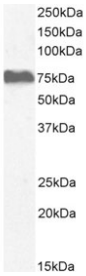
Catalog No.	Formulation	Size
R34044-100UG	0.5 mg/ml in 1X TBS, pH7.3, with 0.5% BSA (US sourced) and 0.02% sodium azide	100 ug

Bulk quote request

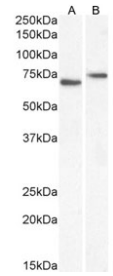
Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Goat
Clonality	Polyclonal (goat origin)
Isotype	Goat Ig
Purity	Antigen affinity
UniProt	Q96PH1
Gene ID	79400
Applications	Western blot: 1-3ug/ml ELISA (peptide) LOD: 1:32000
Limitations	This NOX5 antibody is available for research use only.



NOX5 Antibody Testis WB. Western blot testing of human testis lysate with NOX5 antibody. Predicted molecular weight: ~86 kDa.



NOX5 Antibody Adrenal Gland WB. Western blot testing of human adrenal gland tissue lysate with NOX5 antibody. Predicted molecular weight: ~86 kDa.



Western blot testing of human A) HeLa and B) Caco-2 cell lysate with NOX5 antibody. Predicted molecular weight: ~86 kDa.

Description

NOX5 Antibody recognizes NADPH Oxidase 5 (NOX5), a member of the NADPH oxidase family of enzymes that catalyze the generation of reactive oxygen species (ROS). Unlike other NOX family members, NOX5 contains amino-terminal EF-hand calcium-binding domains that enable direct activation by intracellular calcium without requiring cytosolic regulatory subunits. This unique calcium-dependent mechanism allows NOX5 to rapidly produce ROS in response to cellular stimulation, where these molecules function as important second messengers in signal transduction. Consequently, NOX5 Antibody is widely used to investigate redox biology, calcium-dependent signaling, oxidative stress, and ROS-mediated cellular processes.

NOX5 is expressed in numerous human tissues, including the testis, spleen, lymphoid tissues, vascular smooth muscle, endothelial cells, and various epithelial cell types. Multiple splice variants have been identified, each differing in tissue distribution and regulatory properties. In contrast to humans, common laboratory rodents naturally lack the NOX5 gene, making human tissues, cultured cell lines, and transgenic models particularly valuable for studying its physiological and pathological functions. As interest in human-specific redox signaling continues to grow, NOX5 Antibody has become an important tool for examining NOX5 expression and regulation.

Dysregulated NOX5 activity has been implicated in a broad range of diseases, including cancer, cardiovascular disorders, chronic inflammation, and metabolic disease. Increased NOX5 expression has been reported in prostate, breast, lung, esophageal, and other malignancies, where elevated ROS production promotes cell proliferation, migration, angiogenesis, and resistance to apoptosis. In the cardiovascular system, excessive NOX5-derived ROS contributes to endothelial dysfunction, vascular remodeling, and hypertension. Because ROS regulate numerous signaling pathways controlling gene expression, cell survival, and inflammatory responses, NOX5 remains an active area of investigation in both basic and translational research.

NSJ Bioreagents offers highly validated NOX5 Antibody products for reliable detection of endogenous NOX5 in human tissues and cultured cells. These antibodies support studies of protein expression, localization, and regulation while enabling research into oxidative stress, redox signaling, calcium-dependent signaling pathways, cancer biology, and vascular disease. Researchers investigating reactive oxygen species production and NADPH oxidase function can rely on NOX5 Antibody for consistent and reproducible results across a wide variety of experimental models.

Learn more about the role of NOX5 in reactive oxygen species generation and redox signaling on our NOX5 Antibody / Reactive Oxygen Species Enzyme Antibody page.

Application Notes

Optimal dilution of the NOX5 antibody should be determined by the researcher.

Immunogen

Amino acids EWHPFTISSAPEQKD were used as the immunogen for this NOX5 antibody. This sequence is common to isoforms v1-v6 (UniProt# Q96PH1).

Storage

Aliquot and store the NOX5 antibody at -20oC.

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