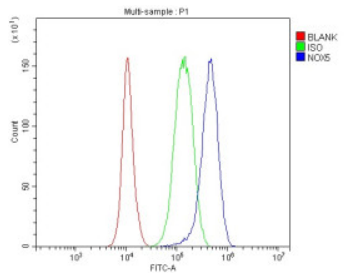
NOX5 Antibody / Reactive Oxygen Species Enzyme Antibody (RQ5745)

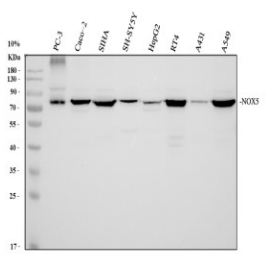
Catalog No.	Formulation	Size
RQ5745	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

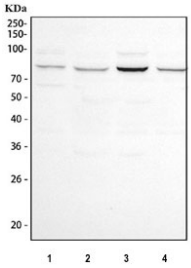
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q96PH1
Localization	Cytoplasmic (ER)
Applications	Western Blot : 0.5-1ug/ml Flow Cytometry : 1-3ug/million cells Direct ELISA : 0.1-0.5ug/ml
Limitations	This NOX5 Antibody / Reactive Oxygen Species Enzyme Antibody is available for research use only.



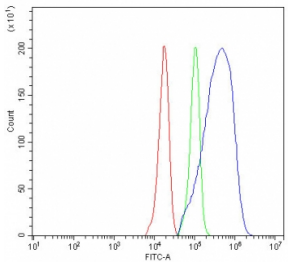
NOX5 Antibody by FACS in PC-3 Cells. Flow cytometry analysis of fixed and permeabilized human PC-3 cells using NOX5 Antibody. Cells stained with the Reactive Oxygen Species Enzyme Antibody (blue) show a clear rightward fluorescence shift relative to the isotype control (green) and unstained cells (red). The separation of the NOX5-positive population from both controls demonstrates intracellular detection of NOX5 in PC-3 cells.



NOX5 Antibody by WB in Human Cancer Cell Lines. Western blot testing of PC-3 (lane 1), Caco-2 (lane 2), SIHA (lane 3), SH-SY5Y (lane 4), HepG2 (lane 5), RT4 (lane 6), A431 (lane 7) and A549 (lane 8) cell lysates with NOX5 Antibody. Strong immunoreactive bands are detected at approximately 70-75 kDa across the eight human cell lines, with some variation in signal intensity. The observed migration is below the predicted ~86 kDa molecular weight of full-length NOX5 and may reflect isoform expression or electrophoretic behavior. The Reactive Oxygen Species Enzyme Antibody produces a dominant NOX5-associated signal with limited additional reactivity.



NOX5 Antibody Human Cell Line WB. Western blot testing of human 1) Jurkat, 2) Raji, 3) HeLa and 4) 293T cell lysate with NOX5 antibody. Predicted molecular weight: ~86 kDa.



NOX5 Antibody HeLa Cell FACS. Flow cytometry testing of fixed and permeabilized human HeLa cells with NOX5 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= NOX5 antibody.

Description

NOX5 Antibody recognizes NADPH Oxidase 5 (NOX5), a calcium-activated enzyme that generates reactive oxygen species (ROS) as part of normal cellular signaling and host defense. Unlike other members of the NADPH oxidase family, NOX5 contains amino-terminal EF-hand calcium-binding domains that allow direct activation by increases in intracellular calcium without requiring accessory regulatory proteins. This distinctive mechanism enables rapid and tightly controlled ROS production in response to physiological stimuli. As a result, NOX5 Antibody is widely used to investigate oxidative stress, redox signaling, calcium-dependent signaling pathways, and ROS-mediated cellular responses across numerous areas of biomedical research.

NOX5 is expressed in a variety of human tissues, including the testis, spleen, lymphoid organs, vascular smooth muscle, endothelial cells, and multiple epithelial tissues. Expression has also been reported in numerous human cancers, where excessive ROS production contributes to tumor cell proliferation, migration, angiogenesis, DNA damage, and resistance to apoptosis. Elevated NOX5 activity has been associated with prostate, breast, esophageal, melanoma, and other malignancies, highlighting its importance in cancer biology. Unlike humans, mice and rats naturally lack the NOX5 gene, making human tissues, cultured cell lines, and transgenic animal models particularly valuable for studying its biological functions. Consequently, NOX5 Antibody has become an important reagent for investigations into oxidative stress and human disease.

Beyond oncology, NOX5 plays significant roles in cardiovascular physiology, inflammation, metabolic regulation, and vascular remodeling. Reactive oxygen species generated by NOX5 function as second messengers that regulate protein kinases, phosphatases, transcription factors, ion channels, and numerous downstream signaling networks. While transient ROS production is essential for normal cellular communication, sustained NOX5 activation can promote chronic inflammation, endothelial dysfunction, fibrosis, and oxidative tissue injury. Because redox signaling influences virtually every aspect of cell biology, NOX5 Antibody is frequently employed to study the molecular mechanisms linking ROS generation to cell proliferation, differentiation, survival, and disease progression.

NSJ Bioreagents offers highly validated NOX5 Antibody products for reliable detection of endogenous NOX5 in human tissues and cultured cells. These antibodies enable researchers to characterize protein expression, localization, and regulation while supporting studies of oxidative stress, redox biology, cancer, cardiovascular disease, inflammation, and calcium-dependent signaling. Whether investigating normal ROS-mediated signaling pathways or the pathological consequences of oxidative stress, NOX5 Antibody provides a dependable tool for both basic and translational research.

Learn more about proteins involved in tumor progression, oxidative stress and cancer cell signaling by visiting our Cancer Antibodies page.

Application Notes

Optimal dilution of the NOX5 Antibody / Reactive Oxygen Species Enzyme Antibody should be determined by the researcher.

Immunogen

Recombinant human protein (amino acids A21-F765) was used as the immunogen for the NOX5 antibody.

Storage

After reconstitution, the NOX5 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

NADPH Oxidase 5 antibody, Reactive Oxygen Species Enzyme antibody, Calcium-Dependent NADPH Oxidase antibody, NOX5A antibody, NOX5B antibody, NOX5L antibody

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