ARG55254
anti-NOX4 antibody

Package: 50 µg
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes NOX4
Tested Reactivity	Hu, Ms, Rat
Tested Application	ELISA, IHC-P, WB
Specificity	NOX4 antibody is human, mouse, and rat reactive. At least four isoforms of NOX4 are known to exist. NOX4 is predicted to not cross-react with other NOX proteins.
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	NOX4
Species	Human
Immunogen	Synthetic peptide (14 aa) within aa. 70-120 of Human NOX4.
Conjugation	Un-conjugated
Alternate Names	RENOX; KOX-1; P; Renal NAD; Kidney oxidase-1; NADPH oxidase 4; KOX; EC 1.6.3.-; Kidney superoxide-producing NADPH oxidase

Application Instructions

Application table

Application	Dilution
ELISA	Assay-dependent
IHC-P	Assay-dependent
WB	1 - 2 µg/ml

Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.
Positive Control	Jurkat Cell Lysate

Properties

Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	PBS and 0.02% Sodium azide
Preservative	0.02% Sodium azide
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed

	before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

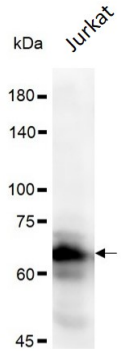
Gene Symbol	NOX4
Gene Full Name	NADPH oxidase 4
Background	The NOX family of NAPDH oxidases is comprised of seven transmembrane proteins that oxidize intracellular NAPDH/NADH, causing electron transport across the membrane and the reduction of molecular oxygen to superoxide. NOX4 is is expressed in multiple tissues and catalyzes the reduction of molecular oxygen to various reactive oxygen species (ROS). Unlike other NOX proteins, NOX4 does not require cytosolic subunits and thus is constitutively active. The function of NOX4 remains unclear as it plays both protective and deleterious roles in cellular metabolism.
Function	Constitutive NADPH oxidase which generates superoxide intracellularly upon formation of a complex with CYBA/p22phox. Regulates signaling cascades probably through phosphatases inhibition. May function as an oxygen sensor regulating the KCNK3/TASK-1 potassium channel and HIF1A activity. May regulate insulin signaling cascade. May play a role in apoptosis, bone resorption and lipolysaccharide-mediated activation of NFKB. May produce superoxide in the nucleus and play a role in regulating gene expression upon cell stimulation. Isoform 3 is not functional. Isoform 5 and isoform 6 display reduced activity. Isoform 4: Involved in redox signaling in vascular cells. Constitutively and NADPH-dependently generates reactive oxygen species (ROS). Modulates the nuclear activation of ERK1/2 and the ELK1 transcription factor, and is capable of inducing nuclear DNA damage. Displays an increased activity relative to isoform 1. [UniProt]
Highlight	Related products: NOX4 antibodies; Anti-Rabbit IgG secondary antibodies; Related news: Pericytes, new therapeutic target for Alzheimer's disease?
Research Area	Cell Biology and Cellular Response antibody; Metabolism antibody; Signaling Transduction antibody
Calculated Mw	67 kDa
PTM	Isoform 3 and isoform 4 are N-glycosylated. Isoform 4 glycosylation is required for its proper function.

Images

ARG55254 anti-NOX4 antibody WB image

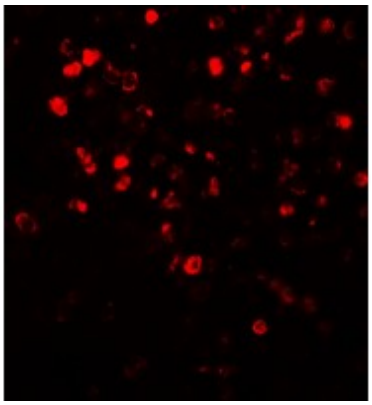
Western blot: Mouse heart stained with ARG55254 anti-NOX4 antibody.

From Lei Zhang et al. Front Physiol (2022), doi: 10.3389/fphys.2022.862187, Fig. 4. C.



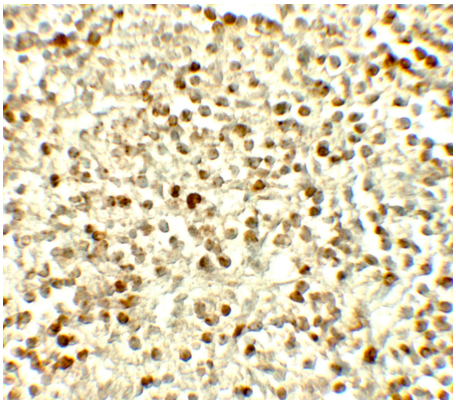
ARG55254 anti-NOX4 antibody WB image

Western blot: 30 µg of Jurkat cell lysate stained with ARG55254 anti-NOX4 antibody at 1:500 dilution.



ARG55254 anti-NOX4 antibody IHC image

Immunohistochemistry: NOX4 in human spleen tissue stained with ARG55254 anti-NOX4 antibody at 20 µg/ml dilution.



ARG55254 anti-NOX4 antibody IHC image

Immunohistochemistry: NOX4 in human spleen tissue stained with ARG55254 anti-NOX4 antibody at 5 µg/ml dilution.