10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-NOXO1 (RABBIT) Antibody
NOXO1 Antibody
Catalog # ASR5330

Specification

Anti-NOXO1 (RABBIT) Antibody - Product Information

Host	**Rabbit**
Conjugate	**Unconjugated**
Target Species	**Human**
Reactivity	**Human**
Clonality	**Polyclonal**
Application	**WB, IHC, E, I, LCI**
Application Note	**Anti-NOXO1 antibody has been tested for use in ELISA, immunohistochemistry and western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 50 kDa in size corresponding to NOXO1 protein by western blotting in the appropriate cell lysate or extract.**
Physical State	**Liquid (sterile filtered)**
Buffer	**0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2**
Immunogen	**NOXO1 affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to amino acids 238-252 of human NOXO1 protein.**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-NOXO1 (RABBIT) Antibody - Additional Information

Gene ID 124056

Other Names
124056

Purity
Anti-NOXO-1 antibody is directed against human NOXO1 protein. The product was affinity purified from monospecific antiserum by immunoaffinity purification. A BLAST analysis was used to suggest cross reactivity with NOXO1 protein from human and chimpanzee (100% homology). Expect reactivity with alpha, delta and gamma isoforms of NOXO1. Also expect partial reactivity against NOXO1 homologues from dog and guinea pig (87%), as well as rat (75%) and mouse (68%). Reactivity against homologues from other sources is not known.

Storage Condition
Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted

liquid. Dilute only prior to immediate use.

Precautions Note
This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-NOXO1 (RABBIT) Antibody - Protein Information

Name NOXO1

Synonyms P41NOX, SH3PXD5

Function
Constitutively potentiates the superoxide-generating activity of NOX1 and NOX3 and is required for the biogenesis of otoconia/otolith, which are crystalline structures of the inner ear involved in the perception of gravity. Isoform 3 is more potent than isoform 1 in activating NOX3. Together with NOXA1, may also substitute to NCF1/p47phox and NCF2/p67phox in supporting the phagocyte NOX2/gp91phox superoxide-generating activity.

Cellular Location
[Isoform 3]: Cell membrane; Peripheral membrane protein; Cytoplasmic side. Note=Isoform 3 associates with the plasma membrane in a lipid-dependent manner (PubMed:12716910)

Tissue Location
Expressed in testis, small and large intestines, liver, kidney and pancreas. Isoform 3 is mainly expressed in colon Isoform 1 is preferentially expressed in testis

Anti-NOXO1 (RABBIT) 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

Anti-NOXO1 (RABBIT) Antibody - Images

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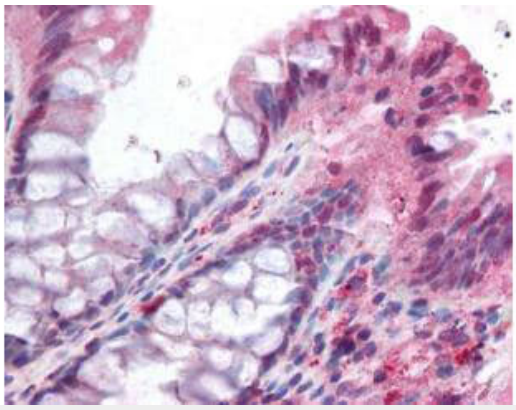

Rockland's affinity purified anti-NOXO1 antibody was used at 5 ug/ml to detect signal in a variety of tissues including multi-human, multi-brain and multi-cancer slides. This image shows moderate positive staining of the lamina propia in human colon epithelium and macrophages at 40X. Tissue was formalin-fixed and paraffin embedded. The image shows localization of the antibody as the precipitated red signal, with a hematoxylin purple nuclear counterstain. Personal Communication, Tina Roush, LifeSpan Biosciences, Seattle, WA.

Anti-NOXO1 (RABBIT) Antibody - Background

This antibody is designed, produced, and validated as part of a collaboration between Rockland and the National Cancer Institute (NCI) and is suitable for Cancer, Immunology and Nuclear Signaling research. The enzymes NADPH oxidase (NOX) and dual oxidase (DUOX) generate ROS in a regulated manner, producing reactive oxygen in various cells and tissues in response to growth factors, cytokines and calcium signals. The oxidase consists of the catalytic subunit gp91phox (otherwise known as NOX2), together with the regulatory subunits p22phox, p47phox, p40phox, p67phox and the small GTPase RAC. The enzyme activity of gp91phox is regulated by the assembly of these regulatory subunits with gp91phox to form an active complex. In 1999, the first of the NOX homologues of gp91phox was described as NOX1. The enzyme was cloned from a colon epithelial cell complementary DNA library. When expressed in cells, NOX1 generated low amounts of ROS, but high-level ROS production by NOX1 was subsequently achieved by co-expression with novel regulatory subunits (described later). Subsequently, NOX3 and NOX4 were cloned, and the latter was shown to generate high levels of ROS when expressed in cells. NOX organizer 1 (NOXO1) is a homologue of p47phox and has an almost identical domain organization, except that it lacks the auto-inhibitory region. NOX activator 1 (NOXA1) is a homologue of p67phox and similarly shares the same domain organization, except that it lacks one of the two SH3 domains that are present in p67phox. Co-transfection of NOX1, NOXO1 and NOXA1 results in marked ROS generation. Similar to p47phox, NOXO1 binds to p22phox, which is required for NOX1-dependent activity. NOXA1 has a well-conserved activation domain, implying a conserved mechanism for regulating the activity of the target NOX enzyme.