

Product datasheet for **TA319211**

NOXO1 Rabbit Polyclonal Antibody

Product data:

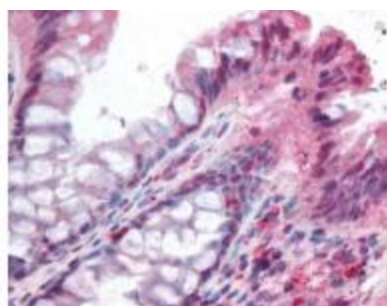
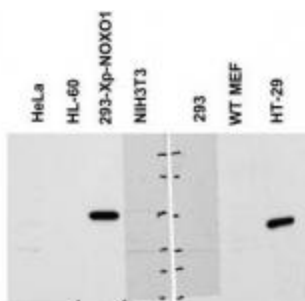
Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	ELISA: 1:20,000 - 1:100,000, WB: 1:2,000 - 1:8,000, IHC: 5-10 ug/ml
Reactivity:	Human, Chimpanzee
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a recombinant protein corresponding to amino acids 238-252 of human NOXO1 protein.
Formulation:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Concentration:	lot specific
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	NADPH oxidase organizer 1
Database Link:	NP_001254650 Entrez Gene 124056 Human Q8NFA2
Synonyms:	P41NOX; P41NOXA; P41NOXB; P41NOXC; SH3PXD5; SNX28



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Note: This antibody 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.

Product images:



WB using Anti-NOXO1 antibody shows detection of a band ~50 kDa corresponding to human NOXO1 (arrowhead). Reactivity was observed in transfected human 293 cells and human HT-29 colon carcinoma cells (endogenous). A 1:1,000 dilution of the primary antibody was used for detection followed by secondary antibody reactivity. Specific band reactivity was competed away when the antibody was pre-incubated with the peptide immunogen (data not shown).

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 propria 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, LifeSpanBiosciences, Seattle, WA.