SANTA CRUZ BIOTECHNOLOGY, INC.

DUOX1 (S-18): sc-48858

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Dual oxidase 1 (DUOX1), a homolog of glycoprotein p91^{Phox}, is expressed in airway epithelium and generates reactive oxygen species (ROS). DUOX1, also designated NADPH thyroid oxidase or large NOX1, is a multi-pass membrane protein predominantly expressed in thyrocytes and tracheal surface epithelial cells, as well as thyroid, trachea and bronchium. DUOX1 generates hydrogen peroxide, which is crucial for thyroid peroxidase and lactoperoxidase. It is also involved in thyroid hormone synthesis and lactoperoxidase-mediated antimicrobial defense in mucosa. DUOX1, which also plays a role in mucin expression, is widely expressed in fetal tissues.

CHROMOSOMAL LOCATION

Genetic locus: DUOX1 (human) mapping to 15q21.1; Duox1 (mouse) mapping to 2 E5.

SOURCE

DUOX1 (S-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of DUOX1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-48858 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

DUOX1 (S-18) is recommended for detection of DUOX1 of mouse, rat, human, and, to a less extent, mink origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

DUOX1 (S-18) is also recommended for detection of DUOX1 in additional species, including bovine and porcine.

Suitable for use as control antibody for DUOX1 siRNA (h): sc-60550, DUOX1 siRNA (m): sc-60551, DUOX1 shRNA Plasmid (h): sc-60550-SH, DUOX1 shRNA Plasmid (m): sc-60551-SH, DUOX1 shRNA (h) Lentiviral Particles: sc-60550-V and DUOX1 shRNA (m) Lentiviral Particles: sc-60551-V.

Molecular Weight of non-glycosylated DUOX1: 150 kDa.

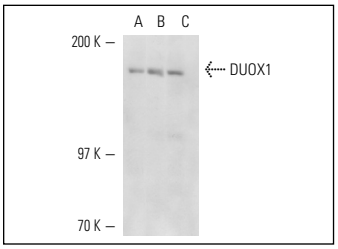
Molecular Weight of glycosylated DUOX1: 165 kDa.

Positive Controls: Mv 1 Lu cell lysate: sc-3810, H69AR whole cell lysate: sc-364382 or A549 cell lysate: sc-2413.

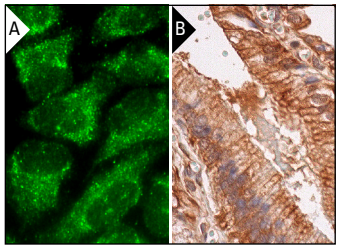
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



DUOX1 (S-18): sc-48858. Western blot analysis of DUOX1 expression in Mv 1 Lu (**A**), A549 (**B**) and H69AR (**C**) whole cell lysates.



DUOX1 (S-18): sc-48858. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing membrane and cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Li, H., et al. 2010. Altered ion transport by thyroid epithelia from CFTR$^{-/-}$ pigs suggests mechanisms for hypothyroidism in cystic fibrosis. Exp. Physiol. 95: 1132-1144.
2. Woolley, J.F., et al. 2012. H_2O_2 production downstream of FLT3 is mediated by p22^{phox} in the endoplasmic reticulum and is required for STAT5 signalling. PLoS ONE 7: e34050.
3. Li, H., et al. 2014. Alterations in the time course of expression of the Nox family in the brain in a rat experimental cerebral ischemia and reperfusion model: effects of melatonin. J. Pineal Res. 57: 110-119.

RESEARCH USE

For research use only, not for use in diagnostic procedures.