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DUOX1 Rabbit pAb

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Catalog # AP54499

Product Information

Application	WB
Primary Accession	Q9NRD9
Reactivity	Human
Predicted	Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	177235
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human DUOX1
Epitope Specificity	1-100/1551
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Apical cell membrane; Multi-pass membrane protein. Note=Localizes to the apical membrane of epithelial cells.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Dual oxidase 1 (DUOX1), a homolog of glycoprotein p91Phox, is expressed in airway epithelium and generates reactive oxygen species (ROS). DUOX1 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.

Additional Information

Gene ID	53905
Other Names	Dual oxidase 1 {ECO:0000312|HGNC:HGNC:3062}, 1.-.-.-, 1.11.1.-, 1.6.3.1, Large NOX 1, Long NOX 1, NADPH thyroid oxidase 1, Thyroid oxidase 1, DUOX1 (HGNC:3062)
Dilution	WB=1:500-2000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

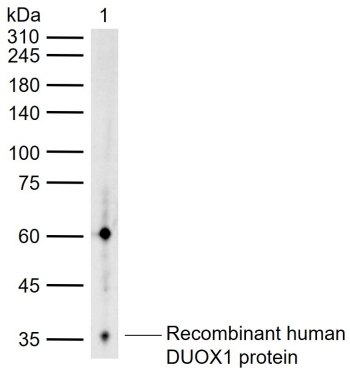
Protein Information

Name	DUOX1 (HGNC:3062)
Function	Generates hydrogen peroxide (H2O2) which is required for the activity of thyroid peroxidase/TPO and lactoperoxidase/LPO (PubMed:10806195, PubMed:15972824). Plays a role in thyroid hormone synthesis (PubMed:10806195). Also required for lactoperoxidase-mediated antimicrobial defense at the surface of mucosa (PubMed:12824283). Antimicrobial agent hypothiocyanite (OSCN-), which is produced by LPO from DUOX1-derived H2O2, promotes influenza virus inactivation by reducing viral binding to and entry into host cells (PubMed:34168077). Promotes antiviral immunity by increasing airway cytokine levels, promoting innate immune cell recruitment and reducing airway epithelial cell apoptosis (By similarity). In response to bacterial stimuli, activated by ATP and promotes EGFR/ERK signaling, ADAM17 activation, and EGFR ligand shedding, leading to enhanced CXCL8/IL8 expression and secretion in airway epithelia (PubMed:19386603). Synthesizes NAADP from its reduced NAADPH form which promotes Ca(2+) signaling during T cell activation (PubMed:34784249). In addition to its oxidase activity, has also been shown to have peroxidase activity through its N-terminal peroxidase-like domain (PubMed:11514595). However, another study showed that the isolated peroxidase-like domain does not bind heme and has no intrinsic peroxidase activity (PubMed:19460756).
Cellular Location	Apical cell membrane; Multi-pass membrane protein. Note=Localizes to the apical membrane of epithelial cells.
Tissue Location	Expressed in thyrocytes and tracheal surface epithelial cells (at protein level). Expressed in thyroid, trachea, bronchium, and to a lower extent, in placenta, testis, prostate, pancreas and heart.

Background

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Images



Sample:
Lane 1: Recombinant human DUOX1 proteinbs-(42186P)
Primary: Anti-DUOX1 (AP54499) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 62 kDa
Observed band size: 36 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.