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[Primary Antibody]

Rabbit Anti-DUOX2 antibody

Catalog Number: SL11432R

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	DUOX2
Immunogen:	KLH conjugated synthetic peptide derived from human DUOX2: 501-600/1548
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Applications:	IHC-P=1:100-500 IHC-F=1:100-500 ICC/IF=1:100-500 IF=1:100-500 ELISA=1:5000-10000 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	(predicted: Human, Mouse, Rat, Dog)
Predicted MW.:	173kDa
Subcellular Location:	The cell membrane
Background:	Dual oxidase 2 (DUOX2), also designated NADPH thyroid oxidase 2, p138 thyroid oxidase or large NOX2, localizes to the apical membrane of epithelial cells. DUOX1, also designated NADPH thyroid oxidase or large NOX1, and DUOX2 are multi-pass membrane proteins predominantly expressed in thyrocytes, tracheal surface epithelial cells as well as thyroid, colon, duodenum, trachea and bronchium. DUOX1 and DUOX2 generate hydrogen peroxide, which is crucial for thyroid peroxidase and lactoperoxidase. In mucosa, DUOX proteins are involved in thyroid hormone biosynthesis and lactoperoxidase-mediated antimicrobial defense. Defects in the gene encoding for DUOX2 cause congenital hypothyroidism (CH), a disorder characterized

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	by a defect in hydrogen peroxide production in the thyroid gland. **Function:** Generates hydrogen peroxide which is required for the activity of thyroid peroxidase/TPO and lactoperoxidase/LPO. Plays a role in thyroid hormones synthesis and lactoperoxidase-mediated antimicrobial defense at the surface of mucosa. May have its own peroxidase activity through its N-terminal peroxidase-like domain. **Subunit:** Interacts with TXNDC11, TPO and CYBA. **Subcellular Location:** Apical cell membrane. Localizes to the apical membrane of epithelial cells. **Tissue Specificity:** Expressed in colon, small intestine, duodenum and tracheal surface epithelial cells (at protein level). Expressed in thyrocytes. Also detected in kidney, liver, lung, pancreas, prostate, salivary glands, rectum and testis. **Post-translational modifications:** N-glycosylated. DISEASE: Defects in DUOX2 are a cause of thyroid dyshormonogenesis 6 (TDH6) [MIM:607200]. A disorder due to a defective conversion of accumulated iodide to organically bound iodine. The iodide organification defect can be partial or complete. **Similarity:** In the N-terminal section; belongs to the peroxidase family. Contains 3 EF-hand domains. Contains 1 FAD-binding FR-type domain. Contains 1 ferric oxidoreductase domain. **Database links:** **Entrez Gene:** 50506 Human **Entrez Gene:** 79107 Rat Omim: 606759 Human **SwissProt:** Q9NRD8 Human **SwissProt:** Q9ES45 Rat **Unigene:** 71377 Human **Unigene:** 55542 Rat

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