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DUOX2 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP11227c

Product Information

Application	WB, FC, E
Primary Accession	Q9NRD8
Other Accession	NP_054799
Reactivity	Human, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB19278
Calculated MW	175364
Antigen Region	513-542

Additional Information

Gene ID	50506
Other Names	Dual oxidase 2, 1111-, Large NOX 2, Long NOX 2, NADH/NADPH thyroid oxidase p138-tox, NADPH oxidase/peroxidase DUOX2, NADPH thyroid oxidase 2, Thyroid oxidase 2, p138 thyroid oxidase, DUOX2, LNOX2, THOX2
Target/Specificity	This DUOX2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 513-542 amino acids from the Central region of human DUOX2.
Dilution	WB~~1:1000 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	DUOX2 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	DUOX2
Synonyms	LNOX2, THOX2

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.
Cellular Location	Apical cell membrane; Multi-pass membrane protein. Cell junction. Note=Localizes to the apical membrane of epithelial cells. Localizes on internal membrane structures under resting conditions, translocates to the plasma membrane and cell-cell junctions upon challenge with enteric pathogens, such as Escherichia coli.
Tissue Location	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.

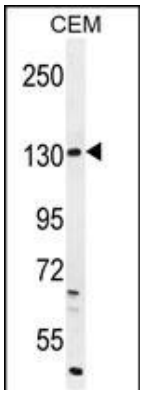
Background

The protein encoded by this gene is a glycoprotein and a member of the NADPH oxidase family. The synthesis of thyroid hormone is catalyzed by a protein complex located at the apical membrane of thyroid follicular cells. This complex contains an iodide transporter, thyroperoxidase, and a peroxide generating system that includes this encoded protein and DUOX1. This protein is known as dual oxidase because it has both a peroxidase homology domain and a gp91phox domain.

References

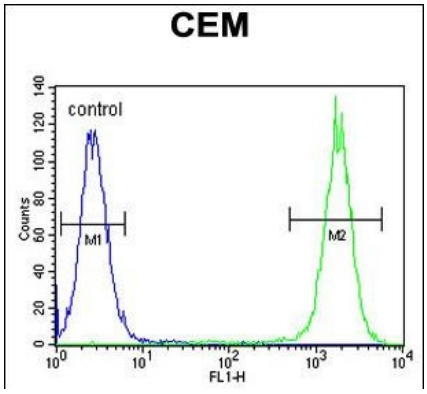
Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)
Salmeen, A., et al. Oncogene 29(31):4473-4484(2010)
Linderholm, A.L., et al. Am. J. Physiol. Lung Cell Mol. Physiol. 299 (2), L215-L221 (2010) :
Roberts, K.E., et al. Gastroenterology 139(1):130-139(2010)
Hill, T. III, et al. Biochem. Biophys. Res. Commun. 395(2):270-274(2010)

Images



DUOX2 Antibody (Center) (Cat. #AP11227c) western blot analysis in CEM cell line lysates (35ug/lane).This demonstrates the DUOX2 antibody detected the DUOX2 protein (arrow).

DUOX2 Antibody (Center) (Cat. #AP11227c) flow cytometric analysis of CEM cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



Citations

- Inducible Lung Epithelial Resistance Requires Multisource Reactive Oxygen Species Generation To Protect against Viral Infections.