

Product datasheet

Anti-epithelial Sodium Channel alpha antibody ab272878

3 Images

Overview

Product name	Anti-epithelial Sodium Channel alpha antibody
Description	Rabbit polyclonal to epithelial Sodium Channel alpha
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P
Species reactivity	Reacts with: Mouse, Human
Immunogen	Recombinant fragment corresponding to Human epithelial Sodium Channel alpha. Center region. Database link: P37088
Positive control	WB: Mouse kidney tissue extract. HEK-293T whole cell lysate. IHC-P: Human colon carcinoma tissue.
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.00 Preservative: 0.01% Thimerosal (merthiolate) Constituents: 79.99% PBS, 20% Glycerol (glycerin, glycerine)
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

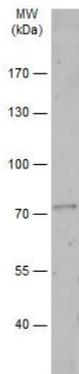
The Abpromise guarantee Our [Abpromise guarantee](#) covers the use of ab272878 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/500 - 1/3000.
IHC-P		1/100 - 1/1000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target

Function	Sodium permeable non-voltage-sensitive ion channel inhibited by the diuretic amiloride. Mediates the electrodiffusion of the luminal sodium (and water, which follows osmotically) through the apical membrane of epithelial cells. Controls the reabsorption of sodium in kidney, colon, lung and sweat glands. Also plays a role in taste perception.
Tissue specificity	Highly expressed in kidney and lung. Detected at intermediate levels in pancreas and liver, and at low levels in heart and placenta. Isoform 1 and isoform 2 predominate in all tissues. Expression of isoform 3, isoform 4 and isoform 5 is very low or not detectable, except in lung and heart.
Involvement in disease	<p>Defects in SCNN1A are a cause of autosomal recessive pseudohypoaldosteronism type 1 (AR-PHA1) [MIM:264350]. PHA1 is a rare salt wasting disease resulting from target organ unresponsiveness to mineralocorticoids. There are 2 forms of PHA1: the autosomal recessive form that is severe, and the dominant form which is milder and due to defects in mineralocorticoid receptor. AR-PHA1 is characterized by an often fulminant presentation in the neonatal period with dehydration, hyponatraemia, hyperkalaemia, metabolic acidosis, failure to thrive and weight loss. Note=The degree of channel function impairment differentially affects the renin-aldosterone system and urinary Na/K ratios, resulting in distinct genotype-phenotype relationships in PHA1 patients. Loss-of-function mutations are associated with a severe clinical course and age-dependent hyperactivation of the renin-aldosterone system. This feature is not observed in patients with missense mutations that reduce but do not eliminate channel function. Markedly reduced channel activity results in impaired linear growth and delayed puberty.</p> <p>Defects in SCNN1A are a cause of bronchiectasis with or without elevated sweat chloride type 2 (BESC2) [MIM:613021]; also called cystic fibrosis-like syndrome. BESC2 is a debilitating respiratory disease characterized by chronic abnormal dilatation of the bronchi and other cystic fibrosis-like symptoms in the absence of known causes of bronchiectasis (cystic fibrosis, autoimmune diseases, ciliary dyskinesia, common variable immunodeficiency, foreign body obstruction). Clinical features include subnormal lung function, sinopulmonary infections, chronic productive cough, excessive sputum production, and elevated sweat chloride in some cases.</p>
Sequence similarities	Belongs to the amiloride-sensitive sodium channel (TC 1.A.6) family. SCNN1A subfamily.
Post-translational modifications	Ubiquitinated; this targets individual subunits for endocytosis and proteasome-mediated degradation.
Cellular localization	Apical cell membrane. Apical membrane of epithelial cells.

Images



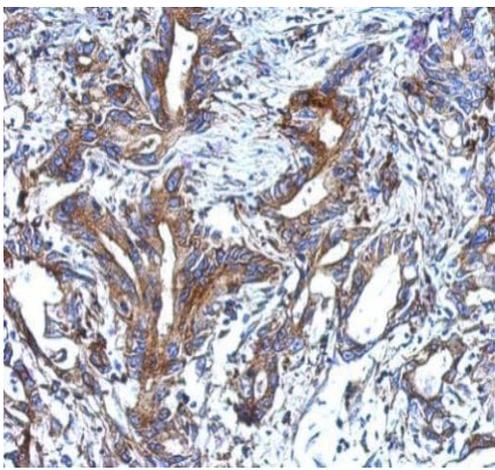
Western blot - Anti-epithelial Sodium Channel alpha antibody (ab272878)

Anti-epithelial Sodium Channel alpha antibody (ab272878) at 1/500 dilution + Mouse kidney tissue extract at 50 μ g

Secondary

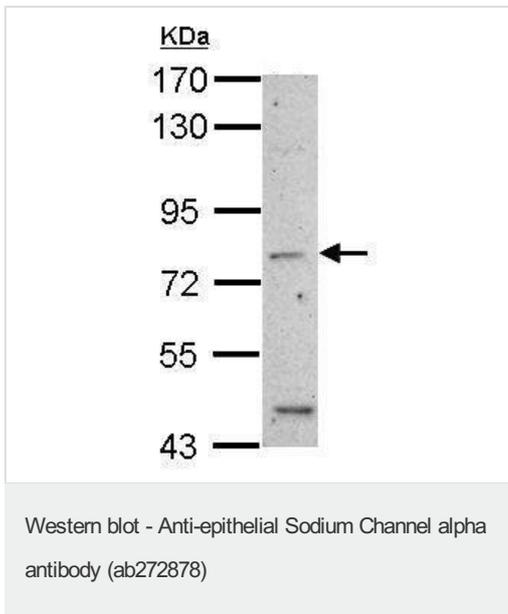
HRP-conjugated anti-rabbit IgG antibody

7.5% SDS-PAGE



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-epithelial Sodium Channel alpha antibody (ab272878)

Paraffin-embedded human colon carcinoma tissue stained for epithelial Sodium Channel alpha using ab272878 at 1/500 dilution in immunohistochemical analysis. Antigen retrieval using EDTA based, pH 8.0 buffer, 15 minutes.



Anti-epithelial Sodium Channel alpha antibody (ab272878) at 1/1000 dilution + HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate at 30 μ g

7.5% SDS PAGE

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