abcam

Product datasheet

Anti-CFTR antibody ab2916

2 References 1 Image

Overview

Product name	Anti-CFTR antibody
Description	Rabbit polyclonal to CFTR
Specificity	Detects cystic fibrosis transmembrane conductance factor (CFTR) from cells overexpressing the human protein.
Tested applications	**Suitable for:** ICC, IP, WB
Species reactivity	**Reacts with:** Human **Predicted to work with:** Rat, Sheep, Rabbit, Guinea pig, Cow, Dog, Pig, Chimpanzee, Monkey, Non human primates, Cynomolgus monkey, Rhesus monkey, Gorilla, Elephant
Immunogen	Synthetic peptide corresponding to Human CFTR aa 103-117. Sequence: GRIIASYDPDNKEER Run BLAST with Run BLAST with

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 or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.05% Sodium azide Constituents: 99% PBS, 0.1% BSA
Purity	Immunogen affinity purified
Primary antibody notes	Cystic Fibrosis (CF) is a common lethal genetic disease caused by mutations of the gene coding for the cystic fibrosis transmembrane conductance factor, a cAMP regulated chloride channel. Approximately 70% of all CF cases share the deletion of a phenylalanine at position 508 (delta F508) which results in abnormal chloride transport. Since the CF mutation is lethal, most often by lung and liver disease, it raises the question of why this genetic disease remains as common as it is. One possible explanation is that Salmonella typhi has been shown to use CFTR to enter intestinal epithelial cells and that delta F508 heterozygote and homozygote mice showed 86% and 100% reductions in S. typhi intestinal submucosal uptake.
Clonality	Polyclonal
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab2916** in the following tested applications.

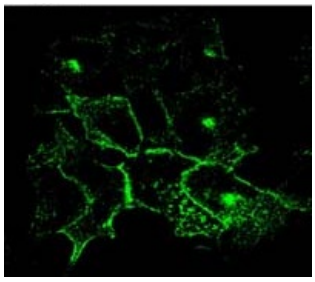
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC		Use a concentration of 1 µg/ml.
IP		Use at an assay dependent concentration.
WB		Use at an assay dependent concentration. Predicted molecular weight: 168 kDa.

Target

Function	Involved in the transport of chloride ions. May regulate bicarbonate secretion and salvage in epithelial cells by regulating the SLC4A7 transporter.
Tissue specificity	Found on the surface of the epithelial cells that line the lungs and other organs.
Involvement in disease	Defects in CFTR are the cause of cystic fibrosis (CF) [MIM:219700]; also known as mucoviscidosis. CF is the most common genetic disease in the Caucasian population, with a prevalence of about 1 in 2'000 live births. Inheritance is autosomal recessive. CF is a common generalized disorder of exocrine gland function which impairs clearance of secretions in a variety of organs. It is characterized by the triad of chronic bronchopulmonary disease (with recurrent respiratory infections), pancreatic insufficiency (which leads to malabsorption and growth retardation) and elevated sweat electrolytes. Defects in CFTR are the cause of congenital bilateral absence of the vas deferens (CBAVD) [MIM:277180]. CBAVD is an important cause of sterility in men and could represent an incomplete form of cystic fibrosis, as the majority of men suffering from cystic fibrosis lack the vas deferens.
Sequence similarities	Belongs to the ABC transporter superfamily. ABCC family. CFTR transporter (TC 3.A.1.202) subfamily. Contains 2 ABC transmembrane type-1 domains. Contains 2 ABC transporter domains.
Domain	The PDZ-binding motif mediates interactions with GOPC and with the SLC4A7, SLC9A3R1/EBP50 complex.
Post-translational modifications	Phosphorylated; activates the channel. It is not clear whether PKC phosphorylation itself activates the channel or permits activation by phosphorylation at PKA sites. Ubiquitinated, leading to its degradation in the lysosome. Deubiquitination by USP10 in early endosomes, enhances its endocytic recycling.
Cellular localization	Early endosome membrane.

Images



Immunocytochemistry/ Immunofluorescence - Anti-CFTR antibody (ab2916)

Immunolocalization of CFTR in HEK293 cells stably transfected with the CFTR gene using ab2916.

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