10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

BTR1 Rabbit pAb

Catalog # AP97224

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q8NBS3
Other Accession	Q8NBS3
Reactivity	Human
Predicted	Rat, Mouse, Chicken, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	98181
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human BTR1
Epitope Specificity	751-850/891
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the anion exchanger (TC 2.A.31) family.
SUBUNIT	Homodimer.
Post-translational modifications	Glycosylated.
DISEASE	Corneal dystrophy and perceptive deafness (CDPD) [MIM:217400]: An ocular disease characterized by the association of corneal clouding with progressive perceptive hearing loss. Note=The disease is caused by mutations affecting the gene represented in this entry.Corneal dystrophy, endothelial 2, autosomal recessive (CHED2) [MIM:217700]: A congenital corneal dystrophy characterized by thickening and opacification of the cornea, altered morphology of the endothelium, and secretion of an abnormal collagenous layer at the Descemet membrane. Note=The disease is caused by mutations affecting the gene represented in this entry. Corneal dystrophy, Fuchs endothelial, 4 (FECD4) [MIM:613268]: A corneal disease caused by loss of endothelium of the central cornea. It is characterized by focal wart-like guttata that arise from Descemet membrane and develop in the central cornea, epithelial blisters, reduced vision and pain. Descemet membrane is thickened by abnormal collagenous deposition. Note=The disease is caused by mutations affecting the gene represented in this entry.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	BtR1 is a cadherin receptor from the tobacco hornworm Manduca sexta.

Additional Information

Gene ID	83959
Other Names	BTR1; CDPD1; CHED; CHED2; NABC1; dJ794I6.2; S4A11_HUMAN; SLC4A11;

	Sodium borate cotransporter 1 (NaBC1); S4A11_MOUSE; solute carrier family 4 member 11; corneal endothelial dystrophy 2 (autosomal recessive); solute carrier family 4, sodium bicarbonate transporter-like, member 11; corneal dystrophy and perceptive deafness 1; solute carrier family 4, sodium borate transporter, member 11; bicarbonate transporter related protein 1; sodium-coupled borate cotransporter 1
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
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	SLC4A11
Synonyms	BTR1
Function	Multifunctional transporter with an impact in cell morphology and differentiation. In the presence of borate B(OH)4(-), acts as a voltage-dependent electrogenic Na(+)-coupled B(OH)4(-) cotransporter controlling boron homeostasis (PubMed:15525507). At early stages of stem cell differentiation, participates in synergy with ITGA5-ITGB1 and ITGAV-ITGB3 integrins and BMPR1A to promote cell adhesion and contractility that drives differentiation toward osteogenic commitment while inhibiting adipogenesis (By similarity). In the absence of B(OH)4(-), acts as a Na(+)-coupled OH(-) or H(+) permeable channel with implications in cellular redox balance (PubMed:15525507, PubMed:28642546). Regulates the oxidative stress response in corneal endothelium by enhancing antioxidant defenses and protecting cells from reactive oxygen species (PubMed:28642546). In response to hypo-osmotic challenge, also acts as a water permeable channel at the basolateral cell membrane of corneal endothelial cells and facilitates transendothelial fluid reabsorption in the aqueous humor (PubMed:23813972, PubMed:25007886, PubMed:31273259). In the presence of ammonia, acts as an electrogenic NH3/H(+) cotransporter and may play a role in ammonia transport and reabsorption in renal Henle's loop epithelium (PubMed:27581649).
Cellular Location	Cell membrane; Multi-pass membrane protein. Basolateral cell membrane; Multi-pass membrane protein
Tissue Location	Widely expressed. Highly expressed in kidney, testis, salivary gland, thyroid, trachea and corneal endothelium. Not detected in retina and lymphocytes. [Isoform 5]: The predominant isoform in corneal endothelium (at protein level).

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