

BTR1 Polyclonal Antibody
Catalog # AP68728**Specification****BTR1 Polyclonal Antibody - Product Information**

Application	WB
Primary Accession	Q8NBS3
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal

BTR1 Polyclonal Antibody - Additional Information**Gene ID** 83959**Other Names**

SLC4A11; BTR1; Sodium bicarbonate transporter-like protein 11; Bicarbonate transporter-related protein 1; Sodium borate cotransporter 1; NaBC1; Solute carrier family 4 member 11

Dilution

WB~~Western Blot: 1/500 - 1/2000. ELISA: 1/20000. Not yet tested in other applications.

Format

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

Storage Conditions

-20°C

BTR1 Polyclonal Antibody - 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

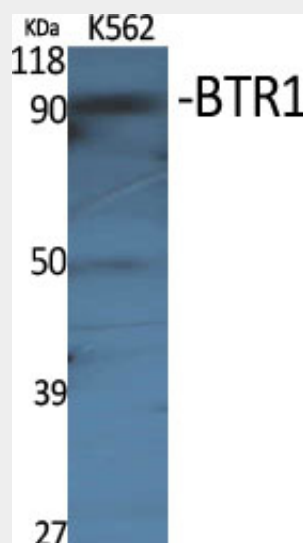
Widely expressed. Highly expressed in kidney, testis, salivary gland, thyroid, trachea and corneal endothelium. Not detected in retina and lymphocytes. [Isoform 5]: The predominant isoform in corneal endothelium (at protein level).

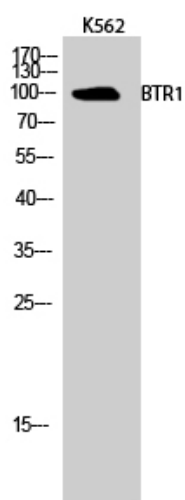
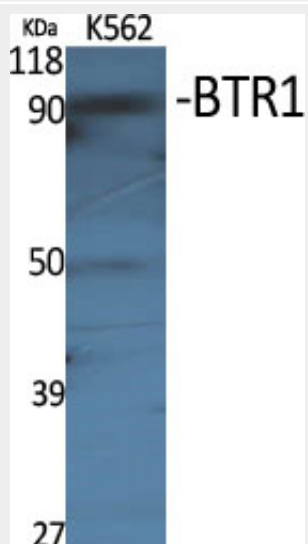
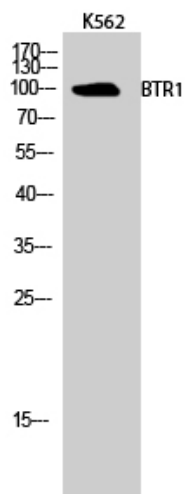
BTR1 Polyclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

BTR1 Polyclonal Antibody - Images





BTR1 Polyclonal Antibody - Background

Transporter which plays an important role in sodium- mediated fluid transport in different organs. Prevents severe morphological changes of the cornea caused by increased sodium chloride concentrations in the stroma. In the inner ear, is involved in transport of potassium through the fibrocyte layer to the stria vascularis and is essential for the generation of the endocochlear potential but not for regulation of potassium concentrations in the endolymph. In the kidney, is essential for urinary concentration, mediates a sodium flux into the thin descending limb of Henle loop to allow countercurrent multiplication by osmotic equilibration (By similarity). Involved in borate homeostasis. In the absence of borate, it functions as a Na(+) and OH(-)(H(+)) channel. In the presence of borate functions as an electrogenic Na(+) coupled borate cotransporter.