SLC9A3 Antibody / Sodium/hydrogen exchanger 3 (FY12613)

Catalog No.	Formulation	Size
FY12613	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	P48764
Applications	Western Blot : 0.25-0.5ug/ml Immunohistochemistry : 2-5ug/ml Immunoprecipitation : 2-4ug/500ug of lysate ELISA : 0.1-0.5ug/ml
Limitations	This SLC9A3 antibody is available for research use only.

Description

SLC9A3 antibody detects Sodium/hydrogen exchanger 3, a membrane transporter that regulates intracellular pH and sodium absorption in epithelial tissues. SLC9A3 plays a vital role in electrolyte balance, acid-base homeostasis, and fluid reabsorption in the kidney and intestine. The SLC9A3 antibody is widely used in renal physiology, gastrointestinal, and cell signaling research to study ion transport mechanisms and epithelial function.

SLC9A3 is encoded by the SLC9A3 gene located on human chromosome 5p15.33. The protein is approximately 834 amino acids long and belongs to the solute carrier 9 family of sodium/hydrogen exchangers (NHEs). It is predominantly expressed in the apical membrane of renal proximal tubule and intestinal epithelial cells, where it exchanges intracellular hydrogen ions for extracellular sodium ions, helping to regulate pH and volume.

The SLC9A3 antibody detects a 90 kilodalton band by western blot and shows apical membrane staining in epithelial tissues under immunofluorescence microscopy. Through its role in sodium absorption, SLC9A3 contributes to systemic

blood pressure control and fluid balance. Regulation of SLC9A3 activity is mediated by phosphorylation and interaction with scaffold proteins such as NHERF1 and ezrin, linking it to hormonal control by angiotensin II and parathyroid hormone.

Mutations in SLC9A3 cause congenital secretory diarrhea and male infertility due to defective sodium transport and fluid absorption. In the kidney, SLC9A3 dysfunction results in impaired bicarbonate reabsorption and metabolic acidosis. Its regulation is critical for maintaining acid-base equilibrium, and its altered expression has been linked to cystic fibrosis and inflammatory bowel disease.

As an essential component of epithelial ion transport, SLC9A3 integrates metabolic, hormonal, and mechanical stimuli to maintain homeostasis. NSJ Bioreagents provides a validated SLC9A3 antibody optimized for its applications, supporting research into renal physiology, intestinal absorption, and electrolyte balance.

Application Notes

Optimal dilution of the SLC9A3 antibody should be determined by the researcher.

Immunogen

E.coli-derived human SLC9A3 recombinant protein (Position: 667-831) was used as the immunogen for the SLC9A3 antibody.

Storage

After reconstitution, the SLC9A3 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.