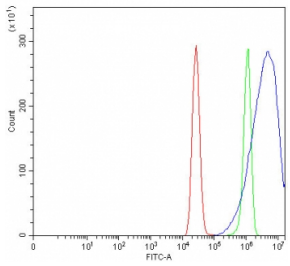
Prostasin Antibody / PRSS8 Antibody (RQ8101)

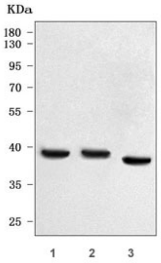
Catalog No.	Formulation	Size
RQ8101	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q16651
RRID	AB_3754809
Applications	Western blot: 0.5-1ug/ml Flow cytometry: 1-3ug/million cells Direct ELISA: 0.1-0.5ug/ml
Limitations	This Prostasin Antibody / PRSS8 Antibody is available for research use only.



Prostasin Antibody Detection in MCF7 Breast Cancer Cells FACS. Flow cytometry testing of fixed and permeabilized human MCF7 breast cancer cells with Prostasin Antibody at 1 ug/million cells following goat serum blocking. The antibody-stained population (blue) shows a clear rightward fluorescence shift relative to the isotype control (green) and cells-alone control (red), demonstrating detection of intracellular prostasin.



Prostasin Antibody Detection in Human Cell and Tissue Lysates WB. Western blot testing of human Caco-2 colorectal adenocarcinoma (lane 1), MCF7 breast cancer (lane 2) and placental tissue (lane 3) lysates with Prostasin Antibody shows discrete bands at approximately 38-42 kDa, near the predicted molecular weight of approximately 36 kDa. The modest difference in apparent molecular weight is consistent with prostasin glycosylation and post-translational processing.

Description

Prostasin Antibody / PRSS8 Antibody recognizes prostasin, a trypsin-like serine protease encoded by the PRSS8 gene. Also known as channel-activating protease 1 or CAP1, prostasin is a membrane-associated protease found predominantly in epithelial tissues. It belongs to the peptidase S1 family and participates in pericellular proteolytic pathways involved in epithelial physiology, ion transport and tissue barrier function.

Prostasin is synthesized as a preproprotein containing an N-terminal signal sequence, a short pro-domain, a catalytic serine protease domain and a C-terminal signal for addition of a glycosylphosphatidylinositol (GPI) anchor. Proteolytic activation generates light and heavy chains that remain connected by a disulfide bond. The mature protein is therefore positioned at the extracellular surface of the plasma membrane, where its protease domain can interact with extracellular and membrane-associated substrates.

A prominent area of PRSS8 research concerns regulation of the epithelial sodium channel ENaC. Prostasin was the first membrane-associated serine protease identified as a channel-activating protease and can promote proteolytic processing associated with increased ENaC activity. This relationship connects prostasin with epithelial sodium transport and physiological processes involved in fluid and electrolyte homeostasis.

Prostasin also participates in protease networks important for epithelial development and barrier integrity. Its activity is closely associated with other membrane serine proteases, including matriptase, which can participate in prostasin zymogen activation. Genetic and biochemical studies have demonstrated particularly important roles for this proteolytic system in epithelial homeostasis. Altered PRSS8 expression and regulation have consequently been investigated in disorders affecting epithelial tissues as well as in cancer biology.

NSJ Bioreagents offers this rabbit polyclonal Prostasin Antibody generated against a recombinant region of human prostasin. A PRSS8 Antibody provides a research tool for investigating prostasin expression and the biology of epithelial proteolysis, barrier regulation and ion-channel control.

Researchers studying prostasin, epithelial proteolysis and regulation of ion-channel activity can explore related targets on our Signal Transduction Antibodies page.

Application Notes

Optimal dilution of the Prostasin Antibody / PRSS8 Antibody should be determined by the researcher.

Immunogen

E. coli-derived recombinant human protein (amino acids Q59-R322) was used as the immunogen for the Prostasin Antibody.

Storage

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

Alternate Names

PRSS8 antibody, Serine protease 8 antibody, Channel-activating protease 1 antibody, CAP1 antibody

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