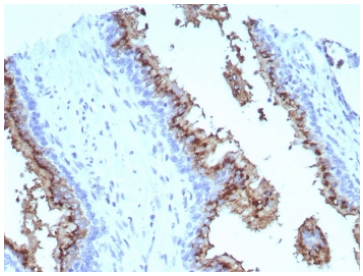
Prostein Antibody / SLC45A3 [clone SLC45A3/7647] (V4783)

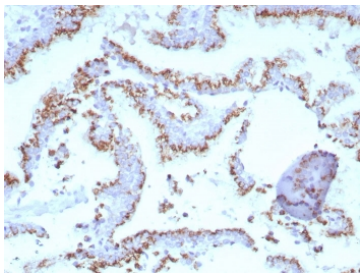
Catalog No.	Formulation	Size
V4783-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4783-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4783SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	SLC45A3/7647
Purity	Protein A/G affinity
UniProt	Q96JT2
Localization	Membrane
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This Prostein antibody is available for research use only.



Prostein Antibody for IHC. Immunohistochemistry analysis of Prostein / SLC45A3 antibody staining in FFPE human prostate tissue using clone SLC45A3/7647. Strong cytoplasmic and perinuclear staining is observed in prostate glandular epithelial cells lining luminal structures, consistent with Golgi-associated localization of Prostein, while surrounding stromal cells remain negative. The staining highlights epithelial cell polarity and intracellular compartmentalization associated with solute carrier transport function within the secretory pathway. Heat-induced epitope retrieval was performed in pH 9 Tris-EDTA buffer for 20 minutes followed by cooling prior to antibody incubation.



Prostein Antibody for IHC. Immunohistochemistry analysis of Prostein / SLC45A3 antibody staining in FFPE human prostate tissue using clone SLC45A3/7647. Prominent cytoplasmic and perinuclear staining is observed in prostate glandular epithelial cells forming luminal structures, with a punctate distribution consistent with Golgi-associated localization of Prostein, while surrounding stromal elements remain largely negative. The staining pattern highlights epithelial cell polarity and intracellular compartmentalization associated with solute carrier transport processes within the secretory pathway. Heat-induced epitope retrieval was performed in pH 9 Tris-EDTA buffer for 20 minutes followed by cooling prior to antibody incubation.

Description

Solute carrier family 45 member 3 (SLC45A3), also known as Prostein, is a prostate-specific protein encoded by the SLC45A3 gene and classified within the solute carrier (SLC) transporter family. Prostein Antibody is used to detect SLC45A3 as a transport-associated protein, providing a framework for studying intracellular trafficking and transport-related processes within prostate epithelial cells.

Prostein antibody, also referred to as SLC45A3 antibody or prostate-specific androgen-regulated protein antibody, belongs to a broader class of SLC proteins that mediate movement of molecules across membranes and within intracellular compartments. While the precise substrates of SLC45A3 remain incompletely defined, its structural features and subcellular localization strongly suggest a role in regulating transport processes linked to protein handling and cellular metabolism in secretory epithelial cells.

Unlike many solute carrier proteins that function at the plasma membrane, SLC45A3 is predominantly localized to the Golgi apparatus. This positioning indicates a specialized role in intracellular transport rather than extracellular solute exchange, placing SLC45A3 within vesicular trafficking pathways that govern protein sorting, modification, and delivery. The Golgi network serves as a central hub for these processes, and proteins localized to this compartment are essential for maintaining proper cellular organization and function.

The SLC transporter family includes diverse proteins involved in ion transport, nutrient exchange, and intracellular trafficking. Within this family, SLC45A3 represents a tissue-restricted member adapted to the functional demands of prostate epithelial cells. Its expression pattern reflects specialization of transport mechanisms to support secretory activity, highlighting the interplay between transport biology and epithelial cell function.

In prostate epithelial cells, efficient intracellular transport is required to maintain polarity, regulate protein secretion, and coordinate signaling pathways. Disruption of these processes can alter protein localization and cellular behavior, contributing to disease states including cancer. The presence of SLC45A3 within Golgi-associated transport pathways suggests that it may play a role in maintaining proper trafficking dynamics within these cells.

Prostein Antibody clone SLC45A3/7647 enables detection of SLC45A3 within the context of solute carrier transport biology, supporting studies focused on intracellular trafficking, compartmental organization, and transport-related cellular processes. Its classification within the SLC family, combined with its prostate-restricted expression and defined Golgi localization, provides a distinct functional angle for investigating transport mechanisms in epithelial systems.

Application Notes

Optimal dilution of the Prostein Antibody / Solute Carrier Transport Protein Antibody should be determined by the researcher.

Immunogen

Recombinant human SLC45A3 protein was used as the immunogen for the Prostein Antibody / Solute Carrier Transport Protein Antibody.

Storage

Aliquot the Prostein antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

SLC45A3 antibody, Prostein antibody, Solute carrier protein antibody, SLC transporter antibody, SLC45A3 transport protein antibody

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