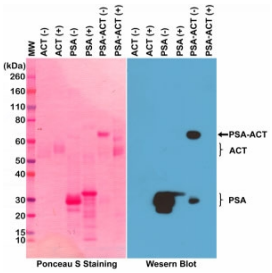
Prostate Specific Antigen Antibody RM323 / KLK3 Antibody [clone RM323] (R20347)

Catalog No.	Formulation	Size
R20347-0.1ML	Antibody in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ul

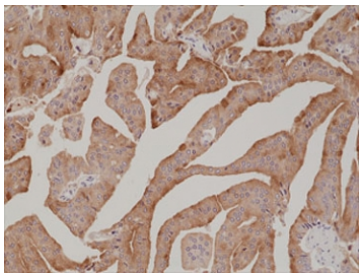
Recombinant RABBIT MONOCLONAL

Bulk quote request

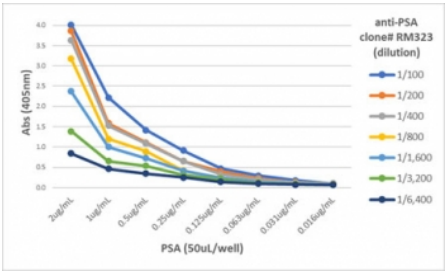
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM323
Purity	Protein A purified from animal origin-free supernatant
UniProt	P07288
Applications	Immunohistochemistry (FFPE): 1:500-1:1000 Western blot (Non-reduced): 1:1000-1:2500 ELISA: 1:100-1:5000
Limitations	This Prostate Specific Antigen Antibody RM323 / KLK3 Antibody is available for research use only.



Prostate Specific Antigen Antibody RM323 Detects Free PSA and PSA-ACT Complex WB. Western blot analysis of purified human PSA, alpha 1-antichymotrypsin (ACT), and PSA-ACT complex using Prostate Specific Antigen Antibody (clone RM323) at 1:2500. Under non-reducing conditions, the antibody detects free PSA at approximately 30 kDa and the higher molecular weight PSA-ACT complex at approximately 70-80 kDa, while ACT alone shows no PSA-reactive band. Reduction disrupts the complex, with PSA detected near its expected molecular weight. Ponceau S staining at left documents protein loading and migration. This KLK3 Antibody distinguishes free PSA from PSA complexed with its protease inhibitor ACT.



Prostate Specific Antigen Antibody RM323 in Human Prostate Cancer IHC. Immunohistochemistry of FFPE human prostate cancer tissue using Prostate Specific Antigen Antibody (clone RM323) at 1:1000 demonstrates strong predominantly cytoplasmic staining of the neoplastic glandular epithelium. The staining is distributed throughout the epithelial cells with accentuation along portions of the luminal/apical surfaces, while nuclei remain largely unstained. This pattern is consistent with the secretory biology of PSA/KLK3 and demonstrates detection of the protein by this KLK3 Antibody in FFPE prostate cancer tissue.



Prostate Specific Antigen Antibody RM323 Titer ELISA. ELISA analysis of purified human PSA using Prostate Specific Antigen Antibody (clone RM323) across serial antibody dilutions. Plates were coated with decreasing amounts of PSA, and bound antibody was detected using alkaline phosphatase-conjugated anti-rabbit IgG. The resulting dose-dependent curves show progressively reduced signal as both PSA coating amount and RM323 concentration decrease, with the strongest response at the highest antibody concentrations. This titration demonstrates concentration-dependent recognition of purified PSA by the KLK3 Antibody over a range of antigen and antibody concentrations.

Description

Prostate Specific Antigen Antibody RM323 recognizes prostate specific antigen (PSA), a secreted serine protease encoded by the KLK3 gene. KLK3 is a member of the kallikrein related peptidase family and is produced predominantly by luminal epithelial cells of the prostate. The protein is synthesized as a preproenzyme and undergoes proteolytic processing to generate the mature, enzymatically active form that is secreted into seminal fluid.

KLK3 functions primarily in the liquefaction of seminal coagulum through proteolytic cleavage of semenogelins and other seminal proteins. Mature PSA is a glycosylated protein with an apparent molecular weight commonly near 30-34 kDa, although migration can vary with glycosylation and protein processing. Its protease activity is regulated after secretion, and circulating PSA can occur in both free form and in complexes with protease inhibitors, particularly alpha 1-antichymotrypsin.

PSA is one of the most extensively studied proteins associated with prostate biology. Expression is strongly regulated by androgen receptor signaling and is closely associated with differentiated secretory prostate epithelium. KLK3 expression is retained in many prostate cancers, making PSA useful in research examining prostate epithelial differentiation, androgen signaling, tumor biology, and prostate-derived proteins. Changes in expression can also accompany alterations in cellular differentiation and disease progression.

Clone RM323 is a recombinant rabbit monoclonal antibody generated against native PSA purified from human seminal fluid. The antibody provides researchers with a defined monoclonal reagent for investigating PSA/KLK3 protein. As a KLK3 Antibody, it can support studies of the mature protein as well as research examining the biochemical forms and molecular interactions of this extensively characterized prostate-associated serine protease. NSJ Bioreagents supplies RM323 for research use only.

A Prostate Specific Antigen Antibody can be used to investigate KLK3 expression, PSA protein biology, prostate epithelial differentiation, and molecular processes associated with normal and malignant prostate tissue.

Explore our Cancer Marker Antibodies page for additional reagents targeting proteins used in cancer biology and tumor marker research.

Application Notes

The stated application concentrations are suggested starting points. Titration of the Prostate Specific Antigen Antibody

RM323 / KLK3 Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Native PSA protein purified from human seminal fluid was used as the immunogen for the recombinant Prostate Specific Antigen Antibody RM323.

Storage

Store the Prostate Specific Antigen Antibody RM323 at -20oC.

Alternate Names

PSA antibody, KLK3 antibody, Kallikrein related peptidase 3 antibody, Human prostate specific antigen antibody

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