

PRODUCT INFORMATION



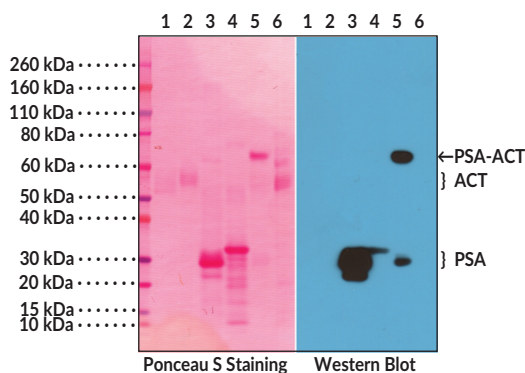
PSA Rabbit Monoclonal Antibody (Clone RM323)

Item No. 32273

Overview and Properties

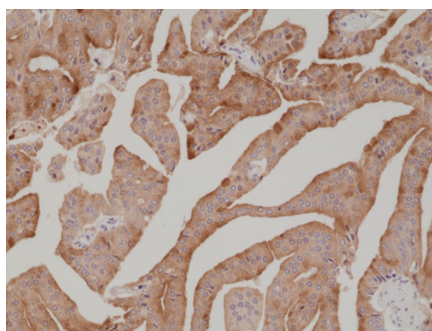
Contents: This vial contains 100 μ l of protein A-affinity purified monoclonal antibody.
Synonyms: Kallikrein-3, Kallikrein-related Peptidase 3, Prostate-specific Antigen
Immunogen: Native human PSA purified from seminal fluid
Cross Reactivity: (+) PSA, PSA-ACT complex
Species Reactivity: (+) Human
Form: Liquid
Storage: -20°C (as supplied)
Stability: \geq 1 year
Storage Buffer: PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone: RM323
Host: Rabbit
Isotype: IgG
Applications: ELISA, immunohistochemistry (IHC), and Western blot (WB; non-reducing conditions); the recommended starting dilution for ELISA is 1:1,000-1:5,000, 1:500-1:1,000 for IHC, and 1:1,000-1:2,500 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Lane 1: ACT non-reduced
Lane 2: ACT reduced
Lane 3: PSA non-reduced
Lane 4: PSA reduced
Lane 5: PSA-ACT non-reduced
Lane 6: PSA-ACT reduced

WB of PSA, ACT, and the PSA-ACT complex under non-reduced or reduced conditions using PSA Rabbit Monoclonal Antibody (Clone RM323) at a 1:2,500 dilution.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human prostate cancer tissue using PSA Rabbit Monoclonal Antibody (Clone RM323) at a 1:1,000 dilution.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Prostate-specific antigen (PSA) is an androgen-regulated serine protease and member of the tissue kallikrein family that is encoded by *KLK3* in humans.¹ It is synthesized with a leader sequence, which is cleaved to generate the enzymatically inactive precursor protein proPSA, which is then cleaved between arginine and isoleucine at positions 7 and 8, respectively, to generate enzymatically active PSA. PSA is expressed primarily by the secretory epithelial cells in the acini and ducts of the prostate gland and is the major protein in seminal fluid where it cleaves enogelin I and II, proteins that mediate gel formation in semen. It is expressed at lower levels in the paraurethral and perianal glands, breast, thyroid, and placental tissues, and apocrine sweat glands. In prostate cancer, the prostate epithelial basement membrane is disrupted which allows PSA to enter the peripheral circulation where it is bound by the protease inhibitor alpha-1-antichymotrypsin (ACT). Serum levels of PSA are commonly used for preventative prostate cancer screening.^{1,2} Cayman's PSA Rabbit Monoclonal Antibody (Clone RM323) can be used for ELISA, immunohistochemistry (IHC), and Western blot (WB; non-reducing conditions) applications. The antibody recognizes free PSA and PSA complexed with ACT (PSA-ACT) from human samples.

References

1. Balk, S.P., Ko, Y.-J., and Bubley, G.J. Biology of prostate-specific antigen. *J. Clin. Oncol.* **21**(2), 383-391 (2003).
2. Ilic, D., Djulbegovic, M., Jung, J.H., *et al.* Prostate cancer screening with prostate-specific antigen (PSA) test: A systematic review and meta-analysis. *BMJ* **362**, k3519 (2018).

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