



Monoclonal Anti-human Kallikrein 3/PSA Antibody

ORDERING INFORMATION

Catalog Number: MAB13441

Clone: 181827

Lot Number: KLO02

Size: 500 µg

Formulation: 0.2 µm filtered solution in PBS with 5% trehalose

Storage: -20° C

Reconstitution: sterile PBS

Specificity: human KLK3

Immunogen: NS0-derived rhKLK3

Ig class: mouse IgG_{2b}

Recommended Application:
Neutralization

Other Applications:
Western blot
Direct ELISA

Preparation

This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with purified, NS0-derived, recombinant human Kallikrein 3 (rhKLK3; aa 19 - 261; Accession # NP_001639). The IgG fraction of the tissue culture supernatant was purified by Protein G affinity chromatography. KLK3 is a member of the Kallikrein family of serine proteases. It is also known as PSA (prostate-specific antigen) and is used in prostate cancer diagnosis.

Formulation

Lyophilized from a 0.2 µm filtered solution in phosphate-buffered saline (PBS) with 5% trehalose.

Reconstitution

Reconstitute with sterile PBS. If 1 mL of PBS is used, the antibody concentration will be 500 µg/mL.

Storage

Lyophilized samples are stable for twelve months from date of receipt when stored at -20° C to -70° C. Upon reconstitution, the antibody can be stored at 2° - 8° C for 1 month without detectable loss of activity. Reconstituted antibody can also be aliquotted and stored frozen at -20° C to -70° C in a manual defrost freezer for six months without detectable loss of activity. **Avoid repeated freeze-thaw cycles.**

Specificity

This antibody was selected for its ability to neutralize the enzymatic activity of human Kallikrein 3. In direct ELISA, this antibody does not cross-react with rhFactor X, rhHGF-A, rhKLK-4, -5, -8, -11, or rhThrombin.

Applications

Neutralization - This antibody has been used to inhibit/neutralize the enzymatic activity of rhKLK3 (R&D Systems, Catalog # 1344-SE). The antibody was preincubated with the enzyme at different molar ratios at room temperature for 30 min. The enzyme was then assayed with a peptide substrate, MeOSuc-RPY-pNA. 50% of the proteolytic activity was inhibited by the antibody at approximately 21 µg/mL (IC₅₀) under conditions in which the enzyme was present at 10 µg/mL and the substrate concentration was 1 mM. Considering the molecular masses of the antibody (150 kDa) and the enzyme (28 kDa), IC₅₀ was achieved at approximately a 1:2 molar ratio of the antibody to the enzyme.

Western Blot - This antibody can be used at 1 - 2 µg/mL with the appropriate secondary reagents to detect human KLK3. Using a chemiluminescent detection system, the detection limit for rhKLK3 is approximately 25 ng/lane under non-reducing conditions. Use of this antibody under reducing conditions is not recommended.

Direct ELISA - This antibody can be used at 0.5 - 1.0 µg/mL with the appropriate secondary reagents to detect human KLK3. The detection limit for rhKLK3 is approximately 50 ng/well.

For **Immunoprecipitation** and **Western blot** applications, the use of MAB1344 or AF1344 is recommended. AF1344 can also be used for **Immunocytochemistry**.

Optimal dilutions should be determined by each laboratory for each application.

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R&D Systems, Inc.
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12/19/05