

**Mouse Anti-Human PSMA Monoclonal Antibody Datasheet****Product Name:** mAb anti-human PSMA**Clone No.:** YPSMA-1 (4G5)**Catalogue No.:** MO-T40086A**Quantity:** 0.5 mg/vial

Description: Mouse monoclonal antibody to human Prostate Specific Membrane Antigen (PSMA)

Purification: Protein G affinity purified

Product Type: Primary antibody

Target Protein: Human Prostate Specific Membrane Antigen (PSMA)

Immunogen: Crude membrane protein preparation from pooled prostate malignant carcinoma from China.

Fusion Myeloma: Sp2/0-Ag14

Specificity: The clone was screened with a synthesized peptide (ESKVDPSK) derived from the amino acid sequence in the extracellular domain of PSMA.

Species Reactivity: Human, others not tested

Cross-Reactivity: Little or no cross-reactivity to benign prostate hyperplasia (BPH) or to normal prostatic tissue.

Host / Isotype: Mouse, IgG2b Kappa

Formulation: Lyophilized from a solution in 0.01M PBS, pH 7.0

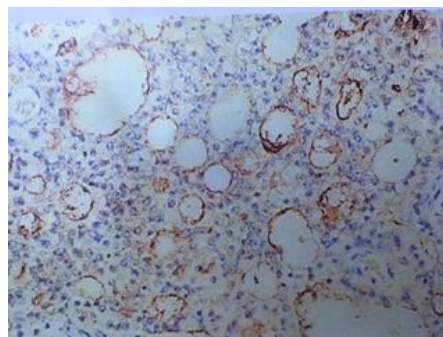
Reconstitution: Double distilled water is recommended to adjust the final concentration to 1.00mg/mL.

Storage: Store at -20°C

Research Area: Oncology

Background: Prostate specific membrane antigen (PSMA) is a type II trans-membrane glycoprotein found in the epithelium of prostate. It is also detectable in duodenal mucosa, renal tubules and some neuroendocrine cells. In other normal tissue, PSMA expression is not detectable. Because the expression of this membrane is elevated in malignant prostate tumour, PSMA has been used as a marker as well as a therapeutic target for prostate cancer. Elevated PSMA expression has also been identified in metastases of lymph nodes.

Applications: **Immuno-histochemistry (IHC):** This antibody was used on formalin-fixed paraffin embedded and frozen tissue sections. Below are IHC staining images of prostate cancer tissue sections using anti-PSMA clone YPSMA-1(4G5), showing positive staining of the vasculature of the cancer tissue.



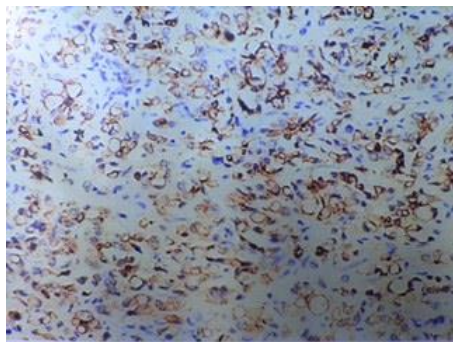
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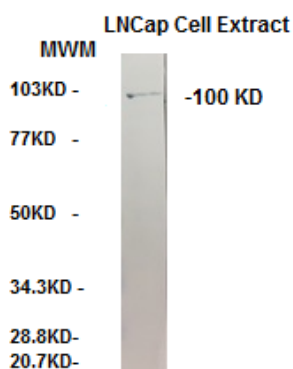


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Western blot: The antibody, when used at 1µg/ml concentration, identified the 100KDa PSMA in LNCap cell membrane extract. The secondary antibody was used at 1:1,000 dilution and the blot was stained directly with HRP substrate 4-Chloro-1-naphthol and H₂O₂. If using chemiluminescent substrate, the secondary antibody should be used at a much lower concentration.



Indirect ELISA: This antibody is reactive to PSMA peptide ESKVDPSK, LNCap cell membrane extract, and LNCap cell coated ELISA plates.

References:

1. ZY Zhu et al., PSMA mimotope isolated from phage displayed peptide library can induce PSMA specific immune response.

Cell Research (1999) 9:271-280.

2. Y Horiguchi et al., Screening of HLA-A24-restricted epitope peptides from prostate-specific membrane antigen that induce specific antitumor cytotoxic T lymphocytes. Clin Cancer Res (2002) 8:3885.

3. Saurabh Aggarwal et al., A Dimeric Peptide That Binds Selectively to Prostate-Specific Membrane Antigen and Inhibits its Enzymatic Activity. Cancer Res (2006) 66; 9171.

4. Rebecca E. Conway et al., Prostate-Specific Membrane Antigen Regulates Angiogenesis by Modulating Integrin Signal Transduction. Mol Cell Biol. Jul (2006); 26(14): 5310-5324.

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