

## PSMA5 monoclonal antibody

Catalog: MB66951

Host: Mouse

Reactivity: Human, Mouse, Rat

### Background:

The 20S proteasome is the major proteolytic enzyme complex involved in intracellular protein degradation. It consists of four stacked rings, each with seven distinct subunits. The two outer layers are identical rings composed of  $\alpha$  subunits (called PSMA5), and the two inner layers are identical rings composed of  $\beta$  subunits. While the catalytic sites are located on the  $\beta$  rings, the  $\alpha$  subunits are important for assembly and as binding sites for regulatory proteins. Seven different  $\alpha$  and ten different  $\beta$  proteasome genes have been identified in mammals. PA700, PA28, and PA200 are three major protein complexes that function as activators of the 20S proteasome. PA700 binds polyubiquitin with high affinity and associates with the 20S proteasome to form the 26S proteasome, which preferentially degrades polyubiquitinated proteins. The proteasome has a broad substrate spectrum that includes cell cycle regulators, signaling molecules, tumor suppressors, and transcription factors. By controlling the degradation of these intracellular proteins, the proteasome functions in cell cycle regulation, cancer development, immune responses, protein folding, and disease progression.

### Product:

Mouse IgG1. Liquid in PBS, pH 7.3, 30% glycerol, and 0.01% sodium azide.

### Molecular Weight:

~ 27 kDa

### Swiss-Prot:

P28066

### Purification&Purity:

This antibody is purified through a protein G column.

### Applications:

WB (1/500 - 1/1000), IHC (1/50 - 1/200), IF/ICC (1/10 - 1/50)

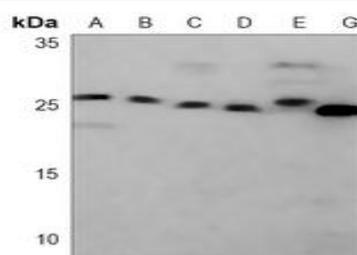
### Storage&Stability:

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

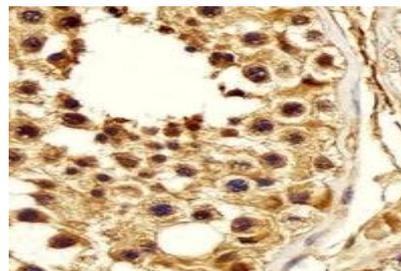
### Specificity:

Recognizes endogenous levels of PSMA5 protein.

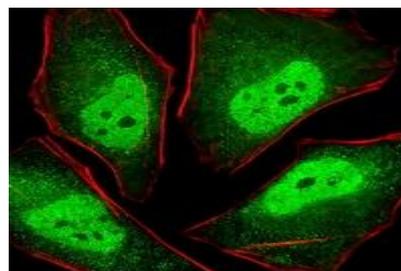
### DATA:



Western blot analysis of PSMA5 expression in human liver (A), HeLa (B), HepG2 (C), MCF7 (D), Neuro2a (E), PC12 (F) whole cell lysates.



Immunohistochemical analysis of PSMA5 staining in human testis formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of PSMA5 staining in HeLa cells. Forma-

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## PRODUCT DATA SHEET

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lin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated

secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF555 was used to stain the cytoplasm (red). DAPI was used to stain the cell nuclei (blue).

### Note:

For research use only, not for use in diagnostic procedure.

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