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PSMA5 Antibody
Mouse Monoclonal Antibody (Mab)
Catalog # AW5056

Specification

PSMA5 Antibody - Product Information

Application	**IF, WB, IHC-P,E**
Primary Accession	P28066
Other Accession	Q9Z2U1, Q5E987, NP_002781.2
Reactivity	**Human**
Predicted	**Bovine, Mouse**
Host	**Mouse**
Clonality	**Monoclonal**
Calculated MW	**H=26,20;M=26;Rat=26 KDa**
Isotype	**IgG1**
Antigen Source	**HUMAN**

PSMA5 Antibody - Additional Information

Gene ID 5686

Antigen Region
1-261

Other Names
PSMA5; Proteasome subunit alpha type-5; Macropain zeta chain; Multicatalytic endopeptidase complex zeta chain; Proteasome zeta chain

Dilution
IF~~1:25
WB~~1:1000
IHC-P~~1:25

Target/Specificity
Purified His-tagged PSMA5 protein(Fragment) was used to produced this monoclonal antibody.

Format
Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
PSMA5 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

PSMA5 Antibody - Protein Information

Name PSMA5 (HGNC:9534)

Function
Component of the 20S core proteasome complex involved in the proteolytic degradation of most intracellular proteins. This complex plays numerous essential roles within the cell by associating with different regulatory particles. Associated with two 19S regulatory particles, forms the 26S proteasome and thus participates in the ATP- dependent degradation of ubiquitinated proteins. The 26S proteasome plays a key role in the maintenance of protein homeostasis by removing misfolded or damaged proteins that could impair cellular functions, and by removing proteins whose functions are no longer required. Associated with the PA200 or PA28, the 20S proteasome mediates ubiquitin- independent protein degradation. This type of proteolysis is required in several pathways including spermatogenesis (20S-PA200 complex) or generation of a subset of MHC class I-presented antigenic peptides (20S-PA28 complex).

Cellular Location
Cytoplasm. Nucleus. Note=Translocated from the cytoplasm into the nucleus following interaction with AKIRIN2, which bridges the proteasome with the nuclear import receptor IPO9

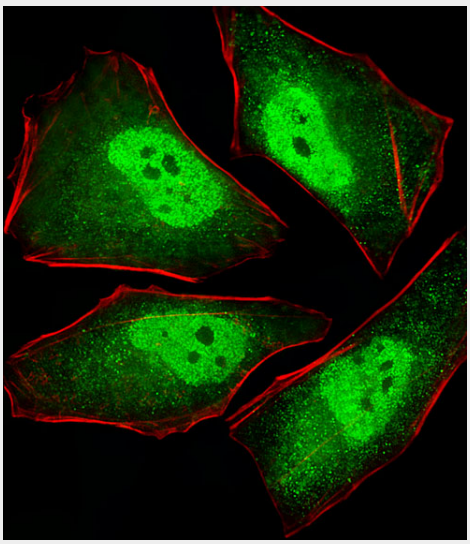
Tissue Location
Expressed in fetal brain (at protein level).

PSMA5 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

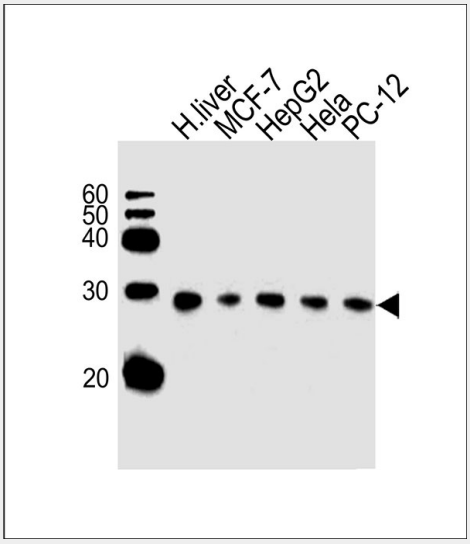
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

PSMA5 Antibody - Images

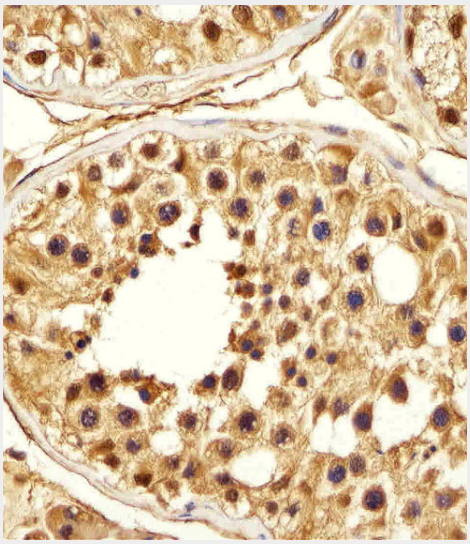


Fluorescent image of Hela cells stained with XAF1 PSMA5 Antibody(Cat#AW5056). AW5056 was

diluted at 1:25 dilution. An Alexa Fluor 488-conjugated goat anti-mouse IgG at 1:400 dilution was used as the secondary antibody (green). Cytoplasmic actin was counterstained with Alexa Fluor® 555 conjugated with Phalloidin (red).



Western blot analysis of lysates from human liver tissue, MCF-7,HepG2,Hela,rat PC-12 cell line (from left to right), using PSMA5 Antibody(Cat. #AW5056). AW5056 was diluted at 1:1000 at each lane. A goat anti-mouse IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody.



Immunohistochemical analysis of paraffin-embedded H. testis section using PSMA5 Antibody(Cat#AW5056). AW5056 was diluted at 1:25 dilution. A peroxidase-conjugated goat anti-mouse IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.

PSMA5 Antibody - Background

The proteasome is a multicatalytic proteinase complex with a highly ordered ring-shaped 20S core structure. The core structure is composed of 4 rings of 28 non-identical subunits; 2 rings are composed of 7 alpha subunits and 2 rings are composed of 7 beta subunits. Proteasomes are distributed throughout eukaryotic cells at a high concentration and cleave peptides in an ATP/ubiquitin-dependent process in a non-lysosomal pathway. An essential function of a modified proteasome, the immunoproteasome, is the processing of class I MHC peptides. This gene encodes a

member of the peptidase T1A family, that is a 20S core alpha subunit.

PSMA5 Antibody - References

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Olsen, J.V., et al. Cell 127(3):635-648(2006)
Beausoleil, S.A., et al. Nat. Biotechnol. 24(10):1285-1292(2006)
Hirano, Y., et al. Nature 437(7063):1381-1385(2005)