10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

PSMB5 Antibody
Rabbit Polyclonal Antibody
Catalog # ALS17241

Specification

PSMB5 Antibody - Product Information

Application	**WB, IHC-P, IF**
Primary Accession	P28074
Other Accession	5693
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**28480**
Dilution	**WB~~1:1000** **IHC-P~~N/A** **IF~~1:50~200**

PSMB5 Antibody - Additional Information

Gene ID 5693

Other Names
PSMB5, Proteasome chain 6, Proteasome subunit MB1, Proteasome subunit X, Proteasome catalytic subunit 3, Macropain epsilon chain, MB1, LMPX, Proteasome beta 5 subunit, Proteasome epsilon chain, Proteasome subunit beta type-5

Target/Specificity
Human PSMB5 / MB1.

Reconstitution & Storage
PBS, pH 7.3, 0.02% sodium azide, 50% glycerol. Long term: -80°C; Short term: -20°C. Avoid freeze-thaw cycles.

Precautions
PSMB5 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

PSMB5 Antibody - Protein Information

Name PSMB5 (HGNC:9542)

Synonyms LMPX, MB1, X

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). Within the 20S core complex, PSMB5 displays a chymotrypsin-like activity.

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

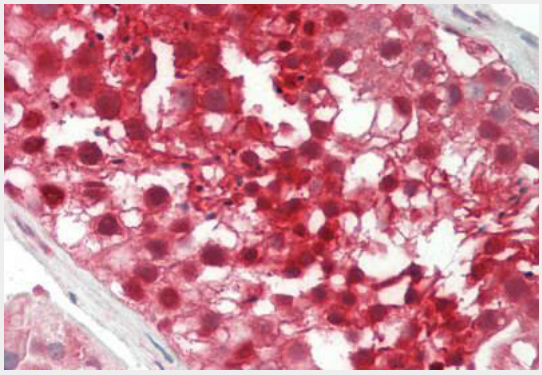
Volume
50 µl

PSMB5 Antibody - Protocols

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

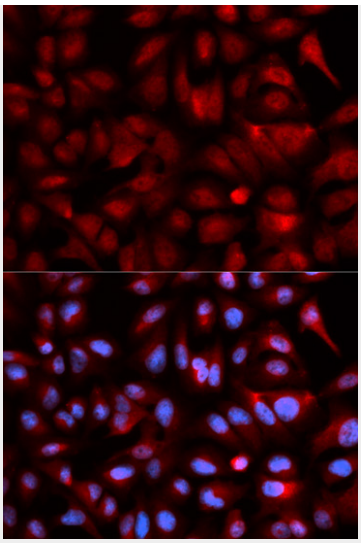
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

PSMB5 Antibody - Images

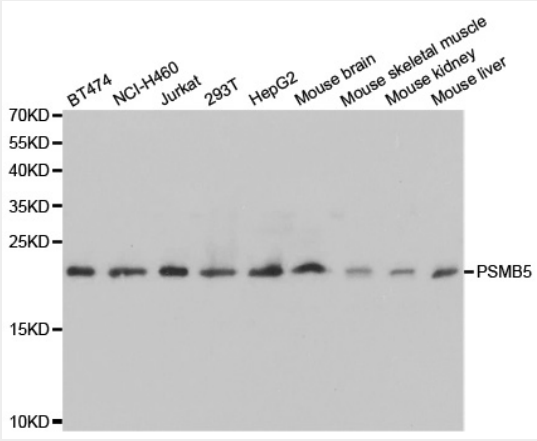


Human Testis: Formalin-Fixed, Paraffin-Embedded (FFPE)

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999



Immunofluorescence analysis of U2OS cell using PSMB5 antibody. Blue: DAPI for nuclear staining.



Western blot analysis of extracts of various cell lines, using PSMB5 antibody.

PSMB5 Antibody - Background

The proteasome is a multicatalytic proteinase complex which is characterized by its ability to cleave peptides with Arg, Phe, Tyr, Leu, and Glu adjacent to the leaving group at neutral or slightly basic pH. The proteasome has an ATP-dependent proteolytic activity. This unit is responsible of the chymotrypsin-like activity of the proteasome and is one of the principal target of the proteasome inhibitor bortezomib. May catalyze basal processing of intracellular antigens. Plays a role in the protection against oxidative damage through the Nrf2-ARE pathway (By similarity).

PSMB5 Antibody - References

Abdulla S.,et al.Immunogenetics 44:254-258(1996).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Bechtel S.,et al.BMC Genomics 8:399-399(2007).
Heilig R.,et al.Nature 421:601-607(2003).
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.

PSMB5 Antibody - Citations

- Gastric cancer cell types display distinct proteasome/immunoproteasome patterns associated with migration and resistance to proteasome inhibitors

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999