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PSMA5 Antibody (Ascites)

Mouse Monoclonal Antibody (Mab)
Catalog # AM2037a

Product Information

Application	WB, E
Primary Accession	P28066
Other Accession	Q9Z2U1, Q5E987, NP_002781.2
Reactivity	Human
Predicted	Bovine, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Clone Names	426CT8.5.1
Calculated MW	26411

Additional Information

Gene ID	5686
Other Names	Proteasome subunit alpha type-5, Macropain zeta chain, Multicatalytic endopeptidase complex zeta chain, Proteasome zeta chain, PSMA5
Target/Specificity	Purified His-tagged PSMA5 protein(Fragment) was used to produced this monoclonal antibody.
Dilution	WB~~1:1000~6400 E~~Use at an assay dependent concentration.
Format	Mouse monoclonal antibody supplied in crude ascites with 0.09% (W/V) sodium azide.
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 (Ascites) is for research use only and not for use in diagnostic or therapeutic procedures.

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).

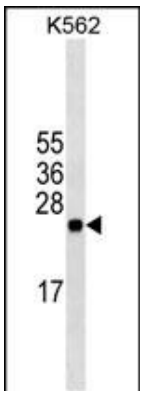
Background

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.

References

Kottgen, A., et al. Nat. Genet. 42(5):376-384(2010)
Sugiyama, N., et al. Mol. Cell Proteomics 6(6):1103-1109(2007)
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)

Images



PSMA5 Antibody (Cat. #AM2037a) western blot analysis in K562 cell line lysates (35µg/lane).This demonstrates the PSMA5 antibody detected the PSMA5 protein (arrow).