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

PSMA5 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1449a

Product Information

Application	WB, IHC-P, E
Primary Accession	P28066
Other Accession	P34064, Q9Z2U1, Q95083, Q95008, Q5E987
Reactivity	Human
Predicted	Bovine, C.Elegans, Drosophila, Mouse, Rat, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB12527
Calculated MW	26411
Antigen Region	1-30

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	This PSMA5 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human PSMA5.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation 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 (N-term) 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).

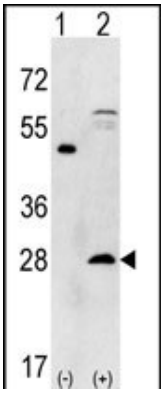
Background

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. PMA5 is a member of the peptidase T1A family, that is a 20S core alpha subunit.

References

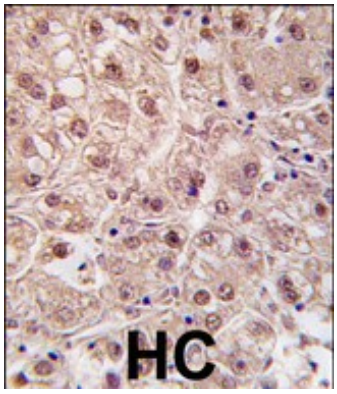
Beausoleil,S.A., Nat. Biotechnol. 24 (10), 1285-1292 (2006)
Gregory,S.G., Nature 441 (7091), 315-321 (2006)
Beausoleil,S.A., Proc. Natl. Acad. Sci. U.S.A. 101 (33), 12130-12135 (2004)
Conticello,S.G., Curr. Biol. 13 (22), 2009-2013 (2003)
Yu,X., Science 302 (5647), 1056-1060 (2003)

Images



Western blot analysis of PSMA5 (arrow) using rabbit polyclonal PSMA5 Antibody (N-term) (Cat.#AP1449a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the PSMA5 gene (Lane 2) (Origene Technologies).

Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with PSMA5 antibody (N-term)(Cat.#AP1449a), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical



relevance has not been evaluated.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.