

Anti-PSMA2 Picoband Antibody

Catalog # ABO11706

Product Information

Application	WB
Primary Accession	P25787
Host	Rabbit
Reactivity	Human, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Proteasome subunit alpha type-2(PSMA2) detection. Tested with WB in Human;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	5683
Other Names	Proteasome subunit alpha type-2, 3.4.25.1, Macropain subunit C3, Multicatalytic endopeptidase complex subunit C3, Proteasome component C3, PSMA2, HC3, PSC3
Calculated MW	25899
Application Details	Western blot, 0.1-0.5 µg/ml, Human, Rat
Subcellular Localization	Cytoplasm. Nucleus. Cytoplasm, P-body . Colocalizes with TRIM5 in the cytoplasmic bodies. .
Source	Eukaryota
Protein Name	Proteasome subunit alpha type-2
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human PSMA2 (82-123aa DYRVLVHRARKLAQQYYLVYQEPIPTAQLVQRVASVMQEYT Q), identical to the related mouse and rat sequences.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20° C for one year. After r° Constitution, at 4° C for one month. It° Can also be aliquotted and stored frozen at -20° C for a longer time.Avoid repeated

freezing and thawing.

Protein Information

Name	PSMA2 (HGNC:9531)
Synonyms	HC3, PSC3
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 (PubMed:34711951) Colocalizes with TRIM5 in cytoplasmic bodies (By similarity) {ECO:0000250 UniProtKB:P49722, ECO:0000269 PubMed:34711951}

Background

Proteasome subunit alpha type-2 is a protein that in humans is encoded by the PSMA2 gene. 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.

Images



Western blot analysis of PSMA2 expression in rat testis extract (lane 1) and MCF-7 whole cell lysates (lane 2). PSMA2 at 26KD was detected using rabbit anti- PSMA2 Antigen Affinity purified polyclonal antibody (Catalog # ABO11706) at 0.5 µg/mL. The blot was developed using chemiluminescence (ECL) method .

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