

Anti-PSMA4 Picoband Antibody

Catalog # ABO11708

Product Information

Application	WB
Primary Accession	P25789
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Proteasome subunit alpha type-4(PSMA4) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	5685
Other Names	Proteasome subunit alpha type-4, 3.4.25.1, Macropain subunit C9, Multicatalytic endopeptidase complex subunit C9, Proteasome component C9, Proteasome subunit L, PSMA4, HC9, PSC9
Calculated MW	29484
Application Details	Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat
Subcellular Localization	Cytoplasm. Nucleus. Cytoplasm, P-body . Colocalizes with TRIM5 in the cytoplasmic bodies. .
Source	Eukaryota
Protein Name	Proteasome subunit alpha type-4
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human PSMA4 (84-123aa NVLTNELRLIAQRYLLQYQEIPCEQLVTALCDIKQAYTQ), 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 reconstitution, 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.

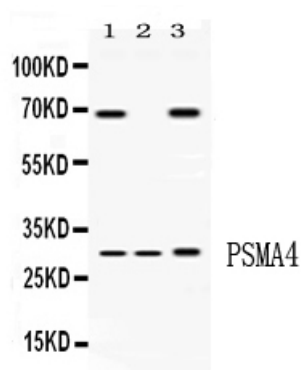
Protein Information

Name	PSMA4 (HGNC:9533)
Synonyms	HC9, PSC9
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 the cytoplasmic bodies (By similarity) {ECO:0000250 UniProtKB:Q9R1P0, ECO:0000269 PubMed:34711951}

Background

Proteasome subunit alpha type-4, also known as macropain subunit C9, proteasome component C9, and 20S proteasome subunit alpha-3, is a protein that in humans is encoded by the PSMA4 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. Three alternatively spliced transcript variants encoding different isoforms have been found for this gene.

Images



Western blot analysis of PSMA4 expression in rat liver extract (lane 1), mouse spleen extract (lane 2) and HELA whole cell lysates (lane 3). PSMA4 at 29KD was detected using rabbit anti- PSMA4 Antigen Affinity purified polyclonal antibody (Catalog # ABO11708) at 0.5 µg/mL. The blot was developed using chemiluminescence (ECL) method .