

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human PSMA1 in direct ELISAs. Detects endogenous human, mouse, and rat PSMA1 in Western blot.
Source	Monoclonal Mouse IgG _{2A} Clone # 785019
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human PSMA1 Gln16-His263 Accession # P25786
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

PSMA1 (Proteasome subunit alpha type-1; also 30 kDa prosomal protein/PROS30, HC2, proteasome component C2/PSC2, PSMA-1/α6, and NU) is a 30 kDa member of the peptidase T1A family of enzymes. It is widely expressed, and found in both cytoplasm and nucleus. Short-lived intracellular molecules (typically proteins) are enzymatically degraded by the 26S proteasome. This is a multisubunit 3D complex that is over 2000 kDa in size, and recognizes previously ubiquitinated proteins. The middle of this 26S complex is shaped like a barrel with four staves that run circumferentially rather than longitudinally. Each stave contains seven subunits, with β-type subunits generating the two center staves, and α-type subunits comprising the outer, or flanking staves. The function of the barrel, also known as the 20S protease core "particle", is to enzymatically cleave substrates that enter its chamber. For proteins, this is done by β-type subunits. The 26S complex also cleaves mRNA, and this is mediated by α-type subunits. PSMA-1/α6 does not cleave mRNA, but it does positively regulate PSMA5/α5 catalytic activity. Notably, PSMA1 has also been reported to bind to LPS. Human PSMA1 is 263 amino acids (aa) in length. It contains an acetylated Met at position #1, plus three utilized phosphorylation sites at Tyr6, Thr11, and Ser16. There are at least four potential isoform variants. Three utilize alternative start sites. One shows a start site at Met140, while a second and third initiates translation at sites 6 and 43 aa upstream of the standard site, respectively. A fourth isoform possess a 16 aa substitution for aa 115-263. Over aa 16-263, human PSMA1 shares 98% aa sequence identity with mouse PSMA1.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.