**BACKGROUND**

Ubiquitin-dependent proteolysis mediates selective destruction of various cell cycle regulators, transcription factors and tumor suppressors. In eukaryotic cells, selective breakdown of cellular proteins is ensured by their ubiquitination and subsequent degradation by the 26S Proteasome. At specific stages of development, embryo- and tissue-specific components of the 26S Proteasome form, facilitating proteolysis. 20S Proteasome α1, also designated macropain subunit C2 or PROS-30, is a prosomal protein involved in a non-lysosomal ATP/ubiquitin-dependent proteolytic pathway. The entire proteasome is composed of at least 15 non-identical subunits which form a highly-ordered ring-shaped structure.

**CHROMOSOMAL LOCATION**

Genetic locus: PSMA1 (human) mapping to 11p15.2; Psma1 (mouse) mapping to 7 F1.

**SOURCE**

20S Proteasome α1 (C-7) is a mouse monoclonal antibody raised against amino acids 131-225 mapping near the C-terminus of 20S Proteasome α1 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG2b kappa light chain in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

20S Proteasome α1 (C-7) is available conjugated to agarose (sc-166073 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166073 HRP), 200 µg/ml, for WB, HIC(P) and ELISA; to either phycoerythrin (sc-166073 PE), fluorescein (sc-166073 FITC), Alexa Fluor® 488 (sc-166073 AF488), Alexa Fluor® 546 (sc-166073 AF546), Alexa Fluor® 594 (sc-166073 AF594) or Alexa Fluor® 647 (sc-166073 AF647), 200 µg/ml, for WB (RGB), IF, HIC(P) and FCM; and to either Alexa Fluor® 680 (sc-166073 AF680) or Alexa Fluor® 790 (sc-166073 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

**APPLICATIONS**

20S Proteasome α1 (C-7) is recommended for detection of 20S Proteasome α1 of mouse, rat and human origin by Western Blotting (starting dilution 1:1000, dilution range 1:100-1:1000), immunoprecipitation (1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

20S Proteasome α1 (C-7) is also recommended for detection of 20S Proteasome α1 in additional species, including bovine and porcine.

Suitable for use as control antibody for 20S Proteasome α1 siRNA (h): sc-45256, 20S Proteasome α1 siRNA (m): sc-45257, 20S Proteasome α1 shRNA Plasmid (h): sc-45256-SH, 20S Proteasome α1 shRNA Plasmid (m): sc-45257-SH, 20S Proteasome α1 shRNA (h) Lentiviral Particles: sc-45256-V and 20S Proteasome α1 shRNA (m) Lentiviral Particles: sc-45257-V.

Molecular Weight of 20S Proteasome α1: 32 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227 or 20S Proteasome α1 (h2): 293T Lysate: sc-112756.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:


**DATA**

![Western blot analysis of 20S Proteasome α1 expression in non-transfected: sc-117752 (A) and human 20S Proteasome α1 transfected: sc-112756 (B) 293T whole cell lysates.](image)

**SELECT PRODUCT CITATIONS**


**STORAGE**

Store at 4°C, **“DO NOT FREEZE”**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**RESEARCH USE**

For research use only, not for use in diagnostic procedures.

**PROTOCOLS**

See our web site at www.scbt.com for detailed protocols and support products.

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