

# 20S Proteasome $\alpha$ 1 (H-95): sc-67046

## 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  $\alpha$ 1, 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; Psm1 (mouse) mapping to 7 F1.

## SOURCE

20S Proteasome  $\alpha$ 1 (H-95) is a rabbit polyclonal antibody raised against amino acids 131-225 mapping near the C-terminus of 20S Proteasome  $\alpha$ 1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

20S Proteasome  $\alpha$ 1 (H-95) is recommended for detection of 20S Proteasome  $\alpha$ 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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  $\alpha$ 1 (H-95) is also recommended for detection of 20S Proteasome  $\alpha$ 1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for 20S Proteasome  $\alpha$ 1 siRNA (h): sc-45256, 20S Proteasome  $\alpha$ 1 siRNA (m): sc-45257, 20S Proteasome  $\alpha$ 1 shRNA Plasmid (h): sc-45256-SH, 20S Proteasome  $\alpha$ 1 shRNA Plasmid (m): sc-45257-SH, 20S Proteasome  $\alpha$ 1 shRNA (h) Lentiviral Particles: sc-45256-V and 20S Proteasome  $\alpha$ 1 shRNA (m) Lentiviral Particles: sc-45257-V.

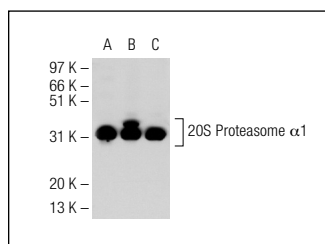
Molecular Weight of 20S Proteasome  $\alpha$ 1: 32 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, MIA PaCa-2 cell lysate: sc-2285 or 20S Proteasome  $\alpha$ 1 (h2): 293T Lysate: sc-112756.

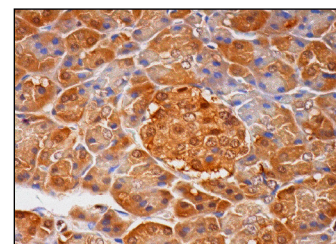
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



20S Proteasome  $\alpha$ 1 (H-95): sc-67046. Western blot analysis of 20S Proteasome  $\alpha$ 1 expression in C4 (A), HeLa (B) and MIA PaCa-2 (C) whole cell lysates.



20S Proteasome  $\alpha$ 1 (H-95): sc-67046. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic and nuclear staining of exocrine glandular cells and Islets of Langerhans.

## SELECT PRODUCT CITATIONS

1. Carmignac, V., et al. 2011. Proteasome inhibition improves the muscle of laminin  $\alpha$ 2 chain-deficient mice. *Hum. Mol. Genet.* 20: 541-552.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



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Try **20S Proteasome  $\alpha$ 1 (C-7): sc-166073**, our highly recommended monoclonal alternative to 20S Proteasome  $\alpha$ 1 (H-95).