Revision 1

Store at -20C

#2408

PA28α Antibody

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Hm Mk	Endogenous	28	Rabbit	#Q06323	5720

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

PA28alpha Antibody detects endogenous levels of total PA28α protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Lys13 of human PA28α. Antibodies are purified by protein A and peptide affinity chromatography.

Background

The 20S proteasome is the major proteolytic enzyme complex involved in intracellular protein degradation. PA700, PA28, and PA200 are three major protein complexes that function as activators of the 20S proteasome. There are three evolutionarily conserved subunits of PA28: PA28α (PSME1), PA28β (PSME2), and PA28γ (PSME3) (1,2). PA28α and PA28β form a heteroheptameric complex and function by binding to the 20S complex at its opening site(s). The PA28α/β complex is present throughout the cell and participates in MHC class I antigen presentation by promoting the generation of antigenic peptides from foreign proteins (2). PA28γ exists in the form of a homoheptamer and is mainly located in the nucleus. The PA28γ complex exerts its function by binding and guiding specific nuclear target proteins to the 20S proteasome for further degradation (3,4).

Background References

1. Dahlmann, B. (2005) *Essays Biochem.* 41, 31-48.
2. Rechsteiner, M. and Hill, C.P. (2005) *Trends Cell Biol.* 15, 27-33.
3. Zhou, P. (2006) *Cell* 124, 256-257.
4. Li, X. et al. (2006) *Cell* 124, 381-392.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Hm:** Hamster **Mk:** Monkey

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Limited Uses

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