

Anti 20S proteasome (GC4/5)

BACKGROUND

The 26S proteasome is an essential component of the ubiquitin-proteolytic pathway in eukaryotic cells and is responsible for the degradation of most cellular proteins. It is composed of a 20S proteasome as a catalytic core and regulatory particles at either end. The subunits of the 20S proteasome can be classified into two families, α and β . In eukaryotes, the 20S proteasome contains seven α -type subunits and seven β -type subunits. The fourteen subunits are arranged in four rings of seven and form an $\alpha_7\beta_7\beta_7\alpha_7$ structure.

This antibody recognizes **α_2 subunit of the 20S proteasome** from all organisms tested, yeast to human. The advance of this antibody is application for immuno-electron microscopy.

Product type	Primary antibody
Immunogen	Purified 20S proteasome purified from goldfish ovary
Based in	Mouse (BALB/c)
Myeloma	P3-U1
Clone number	GC4/5
Isotype	IgG2b
Source	Serum free culture supernatant
Purification	Affinity purified by Protein G
Buffer	PBS containing 0.02% NaN_3 as a preservative
Concentration	1 mg / mL
Volume	100 μL
Label	Unlabeled
Specificity	α_2 subunit of the 20S proteasome
Cross reactivity	yeast, fish, frog, rat, human, plants
Storage	Store below 4°C. (below -70°C for prolonged storage). Aliquot to avoid cycles of freeze/thaw.
Other	Data Link: UniProtKB/Swiss-Plot O73672

Application notes Recommended dilutions

- **Western blotting:** 1/1000 - 1/2000 (Ref.1, Fig.5)(Ref.2, Fig. 3)(Ref.3, Fig. 3)

Other applications have not been tested.

Optimal dilutions/concentrations should be determined by the end user.

References

- 1) Tokumoto, T., Tokumoto, M., Seto, K., Horiguchi, R., Nagahama, Y., Yamada, S., Ishikawa, K., Lohka, M. J. 1999. Disappearance of a novel protein component of the 26S proteasome during Xenopus oocyte maturation. Exp Cell Res 247, 313-319.. PubMed: [10066358](#)
- 2) Wakata, Y., Tokumoto, M., Horiguchi, R., Ishikawa, K., Nagahama, Y., Tokumoto, T. 2004. Identification of alpha-type subunits of the Xenopus 20S proteasome and analysis of their changes during the meiotic cell cycle. BMC Biochem 5, 18. PubMed: [15603592](#)
- 3) Tokumoto, M., Horiguchi, R., Nagahama, Y., Ishikawa, K., Tokumoto, T. 2000. Two proteins, a goldfish 20S proteasome subunit and the protein interacting with 26S proteasome, change in the meiotic cell cycle. Eur J Biochem 267, 97-103. PubMed: [10601855](#)

ANTIBODY CHARACTERIZATION

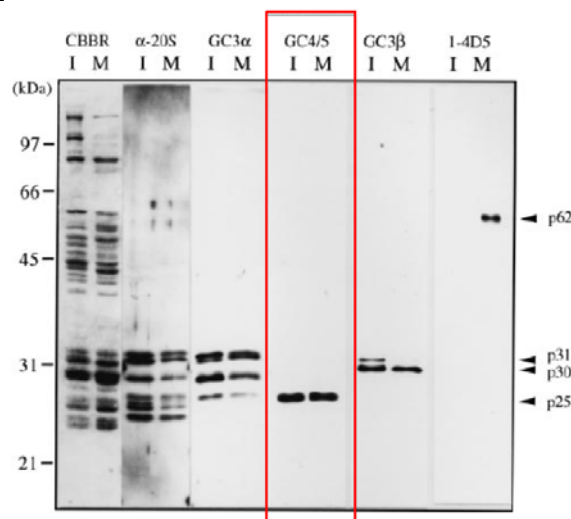


Figure 1 Immunoblotting of the purified 26S proteasomes.

26S proteasomes were electrophoresed under denaturing conditions (12.0% gel) and stained with Coomassie Brilliant Blue (CBBR), or immunostained with antibodies (α -20S, anti-Xenopus 20S proteasome polyclonal antibody; GC3 α ; **GC4/5**; GC3 β ; or 1-4D5) after electroblotting.

Lanes I and M indicate 26S proteasomes from immature and mature oocytes, respectively. Protein bands that cross-reacted with GC4/5 (p25), GC3 β (p30 and p31) and 1-4D5 (p62) are indicated. Molecular masses of standard proteins are indicated on the left. Reference : Eur J Biochem. 2000 Jan;267(1)97-103.

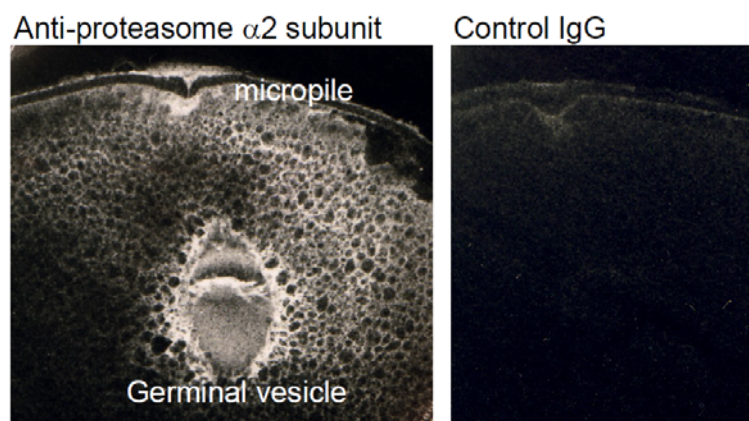


Figure 2 Immunoelectronmicroscopic localization of proteasome α 2 subunit

RELATED PRODUCTS:

Product Name	Quantity	Maker	Cat#
Anti 20S proteasome (GC3 α) Monoclonal Antibody	100 ug	CAC	SU-PS-M01
Anti 20S proteasome (GC3 β) Monoclonal Antibody	100 ug	CAC	SU-PS-M01
Anti 20S proteasome (GC4/5) Monoclonal Antibody	100 ug	CAC	SU-PS-M01
Anti Multiubiquitin, Chain (FK1) Monoclonal Antibody	0.5 MG	NBT	MFK-001
Anti Multiubiquitin, Chain (FK1) Monoclonal Antibody	1 MG	NBT	MFK-002
Anti Multiubiquitin, Chain (FK2) Monoclonal Antibody	0.5 MG	NBT	MFK-003
Anti Multiubiquitin, Chain (FK2) Monoclonal Antibody	1 MG	NBT	MFK-004
Anti SUMO1 (4D12) Monoclonal Antibody	100 ug	CAC	CE-041A
Anti SUMO2 and SUMO3 (3H12) Monoclonal Antibody	100 ug	CAC	CE-042A

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