COSMO BIO CO., LTD.
Inspiration for Life Science

**MONOCLONAL ANTIBODY**

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**Catalog No. SZU-PS-M02**

# Anti 20S proteasome (GC3β)

## 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 α7β7β7α7 structure.
This antibody recognizes **α4 subunit of the 20S proteasome** from all organisms tested, yeast to human. The advance of this antibody is application for immuno-electron microscopy.

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|---|---|
| **Product type** | Primary antibody |
| **Immunogen** | Purified 20S proteasome purified from goldfish ovary |
| **Rased in** | Mouse (BALB/c) |
| **Myeloma** | P3-U1 |
| **Clone number** | GC3β |
| **Isotype** | IgG2a |
| **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 uL |
| **Label** | Unlabeled |
| **Specificity** | α4 subunit of the 20S proteasome |
| **Cross reactivity** | fish, frog, rat, human, plants |
| **Storage** | Store below 4°C. (below -70°C for prolonged storage).<br>Aliquot to avoid cycles of freeze/thaw. |
| **Other** | Data Link: UniProtKB/Swiss-Plot Q9PTW9 |

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**Application notes**
**Recommended dilutions**

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

Other applications have not been tested.
Optimal dilutions/concentrations should be determined by the end user.

**References**


1) Tokumoto, M., Horiguchi, R., Nagahama, Y., Tokumoto, T. (1999). Identification of the Xenopus 20S proteasome alpha4 subunit which is modified in the meiotic cell cycle. *Gene,* **239**, 301-308. PubMed: 10548731
2) 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

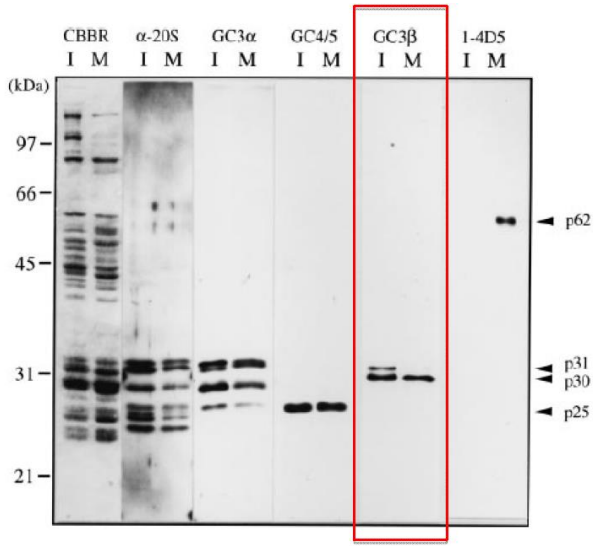


**Figure 1. Immunoblotting of the purified 26S proteasomes.**
26S proteasomes were electrophoresed under denaturing conditions (12.0% gel) and stained with Coomassie Brilliant Blue (CBBR), or immunostained with antibodies (a-20S, anti-Xenopus 20S proteasome polyclonal antibody; GC3α; GC4/5; **GC3β**; 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), GC3β (p30 and p31) and 1-4D5 (p62) are indicated. Molecular masses of standard proteins are indicated on the left. Ref. 2.

## RELATED PRODUCTS:

| Product Name | Quantity | Maker | Cat# |
|---|---|---|---|
| Anti 20S proteasome (GC3α) Monoclonal Antibody | 100 ug | CAC | SU-PS-M01 |
| Anti 20S proteasome (GC3β) 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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