

# PROTEASOME ELISA KIT

## A CONVENIENT NEW KIT FOR DETERMINING PROTEASOME CONCENTRATION

Proteasome ELISA Kit

BML-PW0575

1 kit

HIGHLIGHT

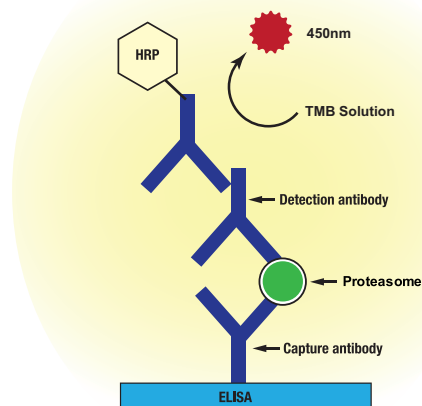
- Determination of proteasome levels in biological samples (serum, plasma, cell lysates, tissue extracts) and quantification *versus* supplied control complex
- Comparison of circulating proteasome levels in plasma/serum samples associated with a particular disease/illness with samples from healthy controls
- Investigation of variation in circulating proteasome levels in response to administration of inhibitors and activators

Proteasome levels have been measured successfully by enzyme-linked immunosorbent assay (ELISA) techniques in cell lysates, serum and plasma samples [1-3]. Such an approach has been used to show that proteasome concentrations in peripheral blood are elevated in patients with certain types of malignant diseases, including multiple myeloma, suggesting that circulating proteasome levels may be correlated with tumor burden. The link between elevated circulating proteasome levels and disease activity has also been demonstrated in patients with systemic autoimmune diseases [4].

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### *Determination of proteasome levels in biological samples using 7 easy steps:*

1. Prepare ELISA plate using capture antibody
2. Add sample and incubate
3. Add detection antibody solution
4. Add secondary antibody solution
5. Develop with TMB chromogen/substrate solution
6. Halt color development using stop solution
7. Measure absorbance at 450nm



**FIGURE :** The ELISA plate is coated with the capture antibody and the proteasome sample is added and allowed to complex with the bound antibody. The detection antibody is then added, followed by the secondary antibody. Subsequent reaction between the activated TMB substrate/chromogen complex and horseradish peroxidase (HRP) conjugated secondary antibody produces a blue colored solution. After reaching the desired color intensity, the reaction is terminated by addition of the stop solution, which changes the solution color from blue to yellow. The plate is then analyzed at 450nm using a UV-Vis spectrophotometric plate reader.

This kit provides the means to quantify proteasome concentrations in biological samples using a sandwich ELISA technique, utilizing two proteasome-subunit specific antibodies for capture and detection purposes, together with a highly sensitive substrate. Sample proteasome levels may be quantified by comparison to a 20S proteasome calibration curve produced in parallel from supplied control complex. This single-use kit provides sufficient material for a 96 well assay.

**LIT:** [1] Immunological methods to quantify and characterize proteasome complexes: development and application: M. Majetschak & L. T. Sorell; J. Immunol. Methods **334**, 91 (2008) • [2] Circulating proteasome levels are an independent prognostic factor for survival in multiple myeloma: C. Jakob, et al.; Blood **109**, 2100 (2007) • [3] Serum concentration and localization in tumor cells of proteasomes in patients with hematologic malignancy and their pathophysiologic significance: M. Wada, et al.; J. Lab. Clin. Med. **121**, 215 (1993) • [4] Circulating proteasomes are markers of cell damage and immunologic activity in autoimmune diseases: K. Egerer, et al.; J. Rheumatol. **29**, 2045 (2002)

## Proteasome Research Products from Enzo Life Sciences

Enzo Life Sciences offers an extensive range of products for research on the proteasome and its related complexes, including proteins and antibodies for the **proteasome** in its various forms (**26S**, **20S**, **19S**, **11S**), COP9 signalosome (**Csn**), tripeptidyl peptidase (**TPPII**) and other post-proteasomal processing enzymes. Our comprehensive enzyme and antibody offering is complemented by a panel of important proteasome substrates and inhibitors, including epoxomicin, often referred to as the 'gold standard' for proteasome inhibition studies. For a complete listing of reagents, please visit: [www.enzolifesciences.com](http://www.enzolifesciences.com)

- 11S Activator
- 19S Regulator
- 20S Proteasome
- 26S Proteasome
- COP9 Signalosome (CSN)
- Tripeptidyl Peptidase (TPPII)
- Proteasome Substrates
- Proteasome Inhibitors

## Related Products

Product	Prod. No.	Size
Proteasome 20S (rabbit)	ALX-202-047-C025	25 µg
Proteasome 20S (human) (purified)	BML-PW8720-0050	50 µg
Proteasome 20S ( <i>Saccharomyces cerevisiae</i> ) (purified)	BML-PW8775-0050	50 µg
Immunoproteasome 20S (human) (purified)	BML-PW9645-0050	50 µg
Proteasome 26S (human) (purified)	BML-PW9310-0050	50 µg
Epoxomicin	BML-PI127-0100	100 µg

## Ubiquitin & UBL Signaling Catalog

Enzo Life Sciences offers a comprehensive range of over 250 products for ubiquitin and ubiquitin-like protein research including ubiquitin and ubiquitin-like proteins; E1, E2, E3 and deconjugating enzymes; substrates and inhibitors; ubiquitin-binding proteins and ubiquitin and ubiquitin-like protein-reactive antibodies. Visit [www.enzolifesciences.com](http://www.enzolifesciences.com) for a complete listing or ask for a free copy of our new Ubiquitin & Ubl Signaling Catalog.



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