

Lot # XXXXX

BostonBiochem

## MATERIAL DATA SHEET

### Z-Leu-Leu-Leu-AMC (Z-LLL-AMC)

Cat. S-220

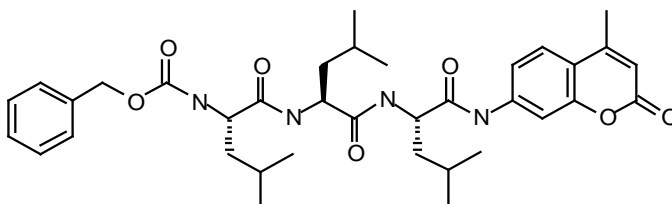
Fluorogenic substrate for measuring the chymotrypsin-like peptidase activity of the 20S proteasome. The 20S complex is composed of 28 subunits, arranged in an  $\alpha_7\beta_7\beta_7\alpha_7$  stoichiometry. Each of the two internal  $\beta$ -type rings harbors three different proteolytically active sites, provided by the amino-terminal residues of three constitutive subunits:  $\beta_1$  (post-glutamyl peptide hydrolase site),  $\beta_2$  (trypsin-like site) and  $\beta_5$  (chymotrypsin-like site).

#### Product Information

**Quantity:** 5 mg

**Formula:**  $C_{36}H_{48}N_4O_7$       **Formula Weight:** 648.8

**Structure:**



#### Physical/Chemical Characteristics

**Stock:** Soluble at  $\geq 20$  mM in DMSO. For best results, pellet dry compound prior to reconstitution.

**Purity:**  $> 95\%$  by TLC, HPLC. Structure confirmed by NMR.

#### Use & Storage

**Use:** Z-LLL-AMC is a fluorogenic substrate for measuring the chymotrypsin-like hydrolyzing activity of the 20S proteasome. Release of AMC fluorescence can be monitored with an excitation wavelength of 345 nm and an emission wavelength of 445 nm. Reaction conditions will need to be optimized for each specific application.

**Storage:** Store DMSO stock at  $-20^{\circ}\text{C}$ . Avoid multiple freeze/thaw cycles.

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## Literature

- References:** Arendt C. S. and Hochstrasser M. (1997) Proc. Natl. Acad. Sci. **94**: 7156  
Coux O., *et al.* (1996) Ann. Rev. Biochem. **65**: 801  
Dick T. P., *et al.* (1998) J. Biol. Chem. **273**: 25637  
Kisselev A. F., *et al.* (1999) Mol. Cell. **4**: 395  
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