

# Ac-Trp-Leu-Ala-AMC

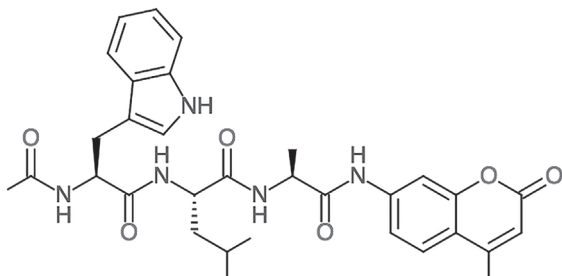
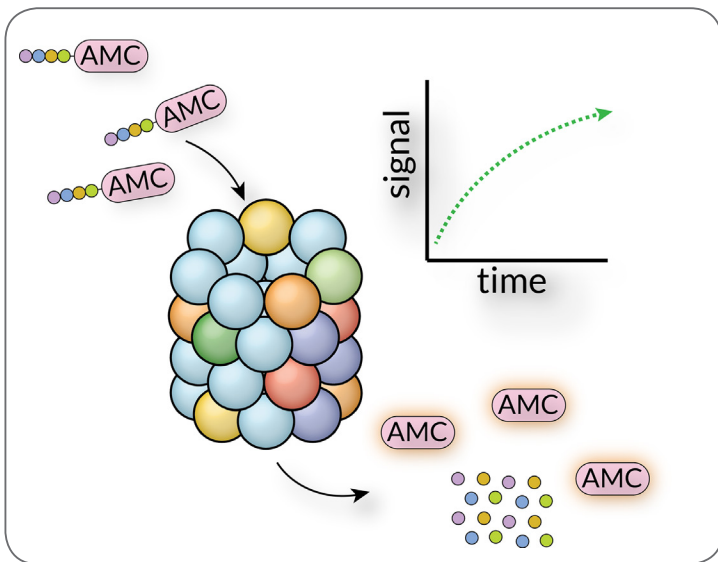
Cat. No. SBB-PS0008  
Lot. No. 163060008



# South Bay Bio

## Ac-WLA-AMC

Ac-WLA-AMC (Acetyl-Trp-Leu-Ala-AMC) is a 7-amino-4-methylcoumarin labeled fluorogenic peptidyl substrate hydrolyzed by the  $\beta 5$  subunit of the 20S proteasome. Chymotrypsin-like activity can be measured using a working concentration of 20-50  $\mu$ M substrate. This substrate is specific to the constitutive proteasome, and is not hydrolyzed efficiently by the immunoproteasome. Cleavage of this peptide by the proteasome or other enzymes liberates the fluorophore AMC causing a strong fluorescent signal which is detected at an Excitation wavelength of 345nm and Emission wavelength of 445nm. 20S Proteasome enzyme requires activation with 0.035% SDS in the assay buffer.



### Ac-WLA-AMC, Chemical Structure.

Structure of Ac-WLA-AMC, 587.7 Da, Ex=345nM, Em=445nM.

## Product Information

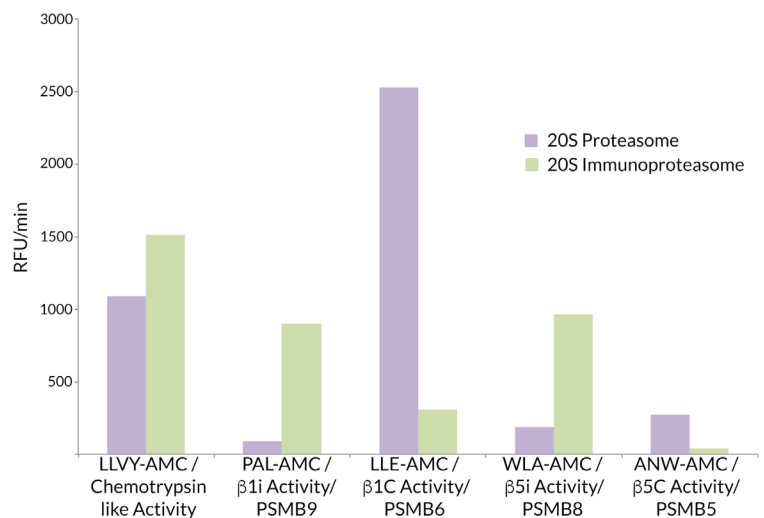
**Quantity:** 2 mg      **Molecular Weight:** 587.7 Da

**Concentration:** Lyophilized      **Purity:** >95% by HPLC

**Solubility:** 10mM in DMSO      **Ex/Em (nm):** 345/445

**Storage:** Store at 4°C after product arrival. After preparing a stock in DMSO ( $\geq 10$  mM) store product at -20°C to -80°C. It is recommended to make multiple aliquots after the first thaw to ensure best performance.

## Quality Control and Performance Data



### 20S Immunoproteasome vs. 20S Constitutive Proteasome Activity.

WLA-AMC exhibits a high specific activity and preference for 20S immunoproteasome compared to constitutive 20S proteasome.

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## References

- 1) Ettari, Roberta, et al. "Immunoproteasome-selective inhibitors: a promising strategy to treat hematologic malignancies, autoimmune and inflammatory diseases." *Current medicinal chemistry* 23.12 (2016): 1217-1238.
  - 2) Miller, Zachary, Woojin Lee, and Kyung Bo Kim. "The immunoproteasome as a therapeutic target for hematological malignancies." *Current cancer drug targets* 14.6 (2014): 537-548.
  - 3) Blackburn, Christopher, et al. "Characterization of a new series of non-covalent proteasome inhibitors with exquisite potency and selectivity for the 20S  $\beta$ 5-subunit." *Biochemical journal* 430.3 (2010): 461-476.
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