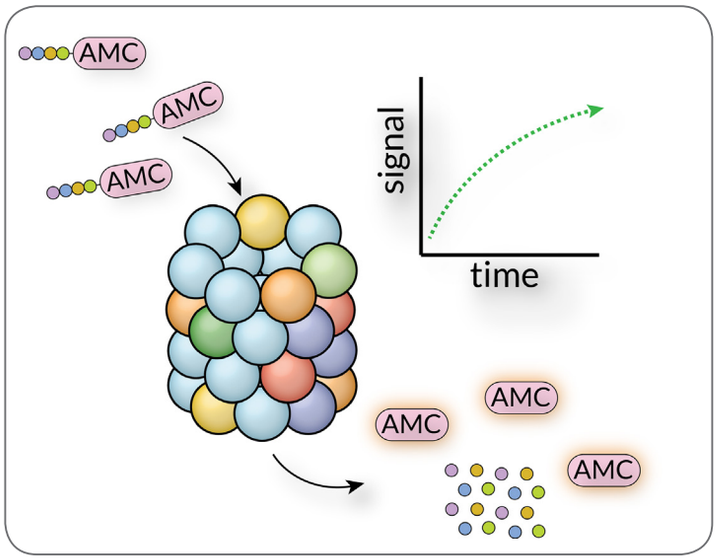
Ac-Trp-Leu-Ala-AMC

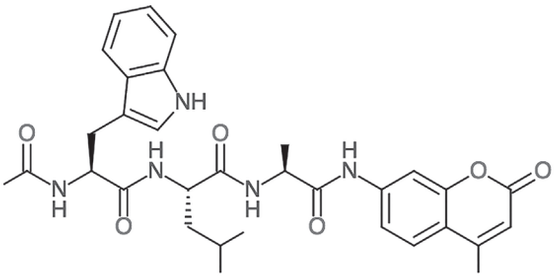
Cat. No. SBB-PS0008
Lot. No. 163060008

South Bay Bío

Ac-WLA-AMC

Ac-WLA-AMC (Acetyl-Trp-Leu-Ala-AMC) is a 7-amino-4-methylcoumarin labeled fluorogenic peptidyl substrate hydrolyzed by the ß5 subunit of the 20S proteasome. Chymotrypsin-like activity can be measured using a working concentration of 20-50µM 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

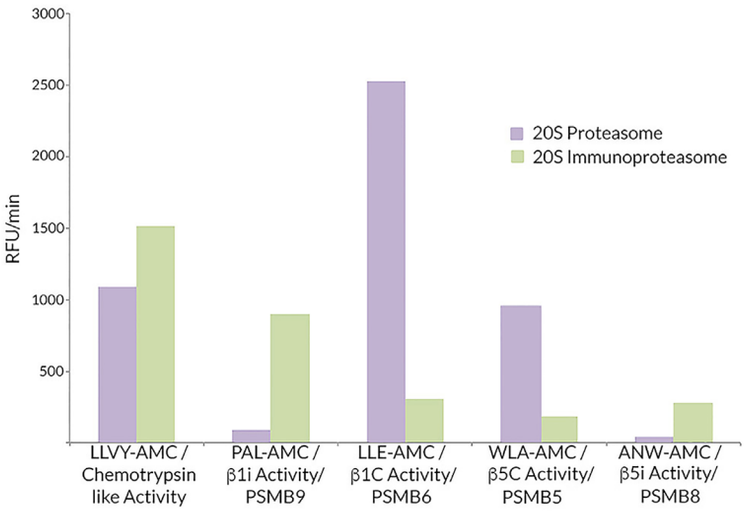
Quantity: 2 mg **Molecular Weight:** 587.7 Da

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 (≥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 constitutive 20S proteasome compared to 20S immunoproteasome.

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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, Wooin 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 ß5-subunit." Biochemical journal 430.3 (2010): 461-476.

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