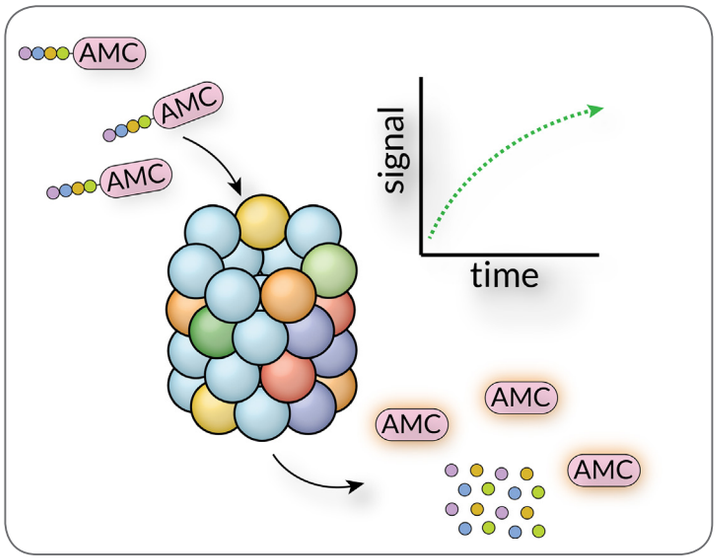
Ac-Ala-Asn-Trp-AMC

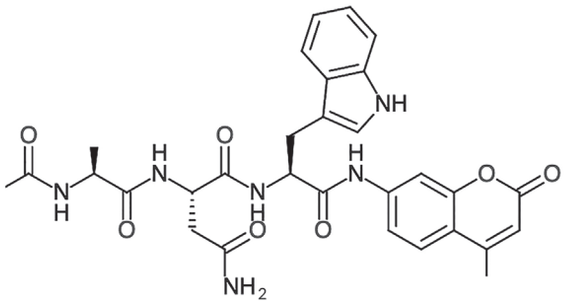
Cat. No. SBB-PS0009
Lot. No. 163060009

South Bay Bío

Ac-ANW-AMC

Ac-ANW-AMC (Acetyl-Ala-Asn-Trp-AMC) is a 7-amino-4-methylcoumarin labeled fluorogenic peptidyl substrate hydrolyzed by the ß5i subunit of the 20S immunoproteasome. Chymotrypsin-like activity can be measured using a working concentration of 20-50µM substrate. This substrate is specific to the immunoproteasome, and is not hydrolyzed efficiently by the constitutive proteasome. Cleavage of this peptide by the immunoproteasome 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-ANW-AMC, Chemical Structure.
Structure of Ac-ANW-AMC, 588.6 Da, Ex=345nM, Em=445nM.

Product Information

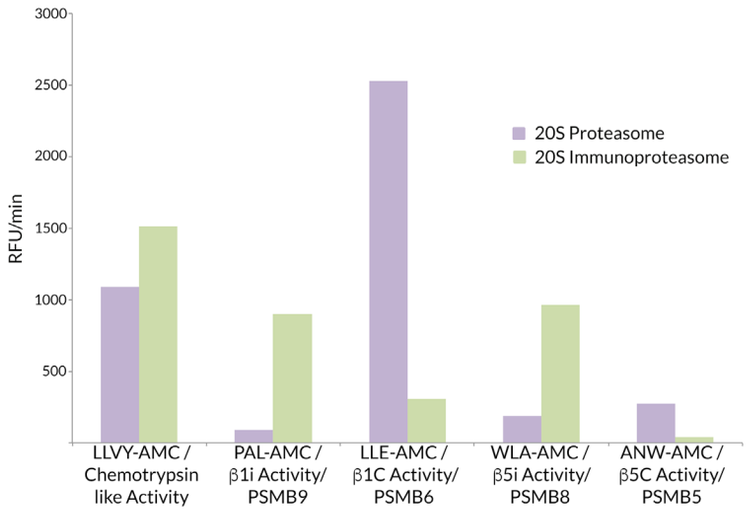
Quantity: 2 mg **Molecular Weight:** 588.6 Da

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.
ANW-AMC exhibits a specificity for 20S constitutive proteasome compared to 20S immunoproteasome.

For Research Use Only, Not For Use In Humans.

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References

1) Singh, Pradeep K., et al. "Immunoproteasome ß5i-Selective Dipeptidomimetic Inhibitors." ChemMedChem 11.19 (2016): 2127-2131.

2) De Groot, Karina A., et al. "Pharmacodynamic monitoring of (immuno) proteasome inhibition during bortezomib treatment of a critically ill patient with lupus nephritis and myocarditis." Lupus science & medicine 2.1 (2015): e000121.

3) Cornish Carmony, Kimberly, et al. "Elucidating the Catalytic Subunit Composition of Distinct Proteasome Subtypes: A Crosslinking Approach Employing Bifunctional Activity-Based Probes." ChemBioChem 16.2 (2015): 284-292.

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