N-Succinyl-Leu-Leu-Val-Tyr 7-Amido-4-trifluoromethylcoumarin

Product Number S 4939
Storage Temperature –20 °C

Product Description
Molecular formula: C_{40}H_{50}F_{3}N_{5}O_{10}
Mol. wt.: 817.9

N-Succinyl-Leu-Leu-Val-Tyr 7-amido-4-trifluoromethylcoumarin (Suc-LLVY-AFC) is a fluorogenic substrate suitable for the assay of enzymes such as chymotrypsin and proteasome protease.\(^1\)

When Suc-LLVY-AFC is hydrolyzed, the free AFC produced in the reaction can be quantified by fluorometric detection (excitation 400 nm, emission 505 nm) or by spectrophotometric detection at 380 nm (extinction coefficient = 12,600 at pH 7.2). When used in an enzyme assay with fluorescence detection, AFC has higher sensitivity than 4-methoxy-2-naphthylamide (MNA).\(^2\)

Chymotrypsin is a serine protease with preferential cleavage at Tyr-, Trp-, Phe-, and Leu- residues. The 26S proteasome is a 2.5 Mda cellular complex that consists of approximately 31 different subunits.\(^3\) It is a self-compartmentalizing protease, which digests polyubiquitinated proteins in the process of ubiquitin-mediated proteolysis.\(^4\)

Preparation Instructions
Prepare stock 20 mM solutions in DMSO. Also soluble in DMF.

Storage/Stability
Store at –20 °C. Product is stable for at least one year, if stored as recommended.

Store stock solutions in frozen aliquots at –20 °C. Allow the material to warm to room temperature before use to ensure stability.

References