

## Product Information

### D-Val-Leu-Arg 7-Amido-4-methylcoumarin

Product Number **V2763**

Storage Temperature  $-20\text{ }^{\circ}\text{C}$

#### Product Description

Molecular formula:  $\text{C}_{27}\text{H}_{41}\text{N}_7\text{O}_5$

Mol. wt.: 543.7

D-Val-Leu-Arg 7-amido-4-methylcoumarin (D-VLR-AMC) is a fluorogenic substrate suitable for the assay of glandular tissue kallikrein and other serine proteases.<sup>1,2</sup>

When D-VLR-AMC is hydrolyzed, the free AMC produced in the reaction can be quantified by fluorometric detection (excitation 380 nm, emission 460 nm). When used in an enzyme assay with fluorescence detection, AMC offers much higher sensitivity than 4-methoxy-2-naphthylamide (MNA) does.<sup>3</sup>

Glandular tissue kallikrein is a serine protease that hydrolyzes serum kininogens, glycoproteins occurring in serum, to produce kinins. Kallikrein prefers Arg or Lys at the site of hydrolysis. D-VLR-AMC may also be suitable for other serine proteases with the same peptide recognition sequence.

D-VLR-AMC is supplied as the trifluoroacetate salt.

#### Preparation Instructions

Prepare stock 10 mM solutions in DMSO.

#### Storage/Stability

Store at  $-20\text{ }^{\circ}\text{C}$ . Material stable for at least one year, when stored as recommended

Store stock solutions in frozen aliquots at  $-20\text{ }^{\circ}\text{C}$ . Allow the material to warm to room temperature before use to ensure stability.

#### References

1. Shori, D. K., et al., New specific assays for tonin and tissue kallikrein activities in rat submandibular glands. Assays reveal differences in the effects of sympathetic and parasympathetic stimulation on proteinases in saliva. *Biochem. Pharmacol.*, **43**, 1209-1217 (1992).
2. Yu, J. X., et al., Prostasin is a novel human serine proteinase from seminal fluid. Purification, tissue distribution, and localization in prostate gland. *J. Biol. Chem.*, **269**, 18843-8 (1994).
3. Harris, J. L., et al., Rapid and general profiling of protease specificity by using combinatorial fluorogenic substrate libraries. *Proc. Natl. Acad. Sci. U.S.A.*, **97**, 7754 (2000).
4. Johansen, H. T., et al., Colorimetric and fluorimetric microplate assays for legumain and a staining reaction for detection of the enzyme after electrophoresis. *Anal. Biochem.*, **273**, 278-283 (1999).

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