

Product Data Sheet

Product Name: D-Val-Leu-Lys-pNA acetate

Cat. No.: GC80340

Chemical Properties

Cas. No.

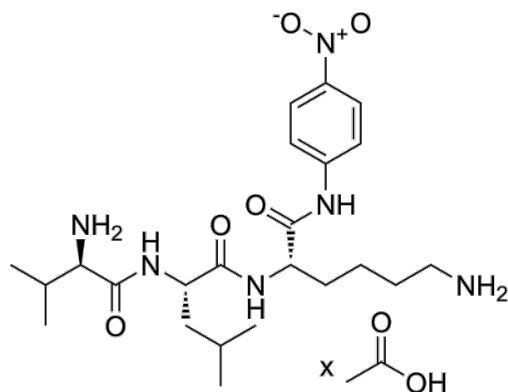
Formula $C_{23}H_{38}N_6O_5 \cdot xC_2HF_3O_2$ M.Wt 478.59

Solubility DMSO: 100 mg/mL (Need ultrasonic) Storage Sealed storage, away from moisture and light

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

D-Val-Leu-Lys-pNA acetate (S-2251 acetate) is a chromogenic peptide substrate that serves as a characteristic substrate for plasmin and plasminogen. D-Val-Leu-Lys-pNA acetate acts as a sensitive substrate for the DFE27 serine protease derived from *Bacillus subtilis* DC27. Catalyzed by plasmin, D-Val-Leu-Lys-pNA acetate binds and hydrolyzes to release p-nitroaniline (pNA), which can be detected colorimetrically at 405 nm as a measure of fibrinolytic activity [1] [2].

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

In Vitro, D-Val-Leu-Lys-pNA (1 mM; 30 min at 37°C) acetate was the substrate against which purified DFE27 serine protease from *Bacillus subtilis* DC27 exhibits the highest amidolytic activity, with a hydrolysis rate of $225.291 \text{ mmol} \cdot \text{min}^{-1} \cdot \text{mL}^{-1}$ ^[1]. D-Val-Leu-Lys-pNA (0.16 mM) acetate is hydrolyzed by Lys-gingipain from *Porphyromonas gingivalis* (strain H66) with a K_m of 0.2 mM, V_{max} of 133 mmol/min, and V_{max}/K_m ratio of 665^[2].

References:

- [1]. Hu Y, et al. Purification and characterization of a novel, highly potent fibrinolytic enzyme from *Bacillus subtilis* DC27 screened from Douchi, a traditional Chinese fermented soybean food. *Sci Rep.* 2019;9(1):9235. Published 2019 Jun 25.
- [2]. Pike R, et al. Lysine- and arginine-specific proteinases from *Porphyromonas gingivalis*. Isolation, characterization, and evidence for the existence of complexes with hemagglutinins. *J Biol Chem.* 1994 Jan 7;269(1):406-11.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA