Product Data Sheet

Product Name: Dansyl-Tyr-Val-Gly-OH
Cat. No.: GA21367

Chemical Properties

Cas. No.	113527-49-4		
Formula	$C_{28}H_{34}N_4O_7S$	M.Wt	570.67
Solubility	Soluble in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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	Dansyl-Tyr-Val-Gly-OH		

Background

Dansyl-Tyr-Val-Gly-OH is a substrate for peptidylglycine monooxygenase (PAM)[1]. PAM is a key enzyme that converts glycine-extended precursor peptides into biologically active α-amidated peptides, a process essential for the maturation and function of numerous peptide hormones and signaling peptides[2][3]. Dansyl-Tyr-Val-Gly-OH can be used for real-time monitoring of PAM enzyme activity and to elucidate the mechanism of peptide amidation in cell differentiation, metabolic regulation and tumorigenesis[4][5]. Dansyl-Tyr-Val-Gly-OH is widely used in fields such as oncology and biochemical analysis[6][7].

References:
[1] Welch EF, Rush KW, Arias RJ, Blackburn NJ. Pre-Steady-State Reactivity of Peptidylglycine Monooxygenase Implicates Ascorbate in Substrate Triggering of the Active Conformer. *Biochemistry*. 2022;61(8):665-677.
[2] Merkler DJ, Hawley AJ, Eipper BA, Mains RE. Peptidylglycine α-amidating monooxygenase as a therapeutic target or biomarker for human diseases. *Br J Pharmacol*. 2022;179(13):3306-3324.
[3] Bäck N, Mains RE, Eipper BA. PAM: diverse roles in neuroendocrine cells,

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cardiomyocytes, and green algae. *FEBS J*. 2022;289(15):4470-4496.
[4] Bauman AT, Jaron S, Yukl ET, Burchfiel JR, Blackburn NJ. pH Dependence of peptidylglycine monooxygenase. Mechanistic implications of Cu-methionine binding dynamics. *Biochemistry*. 2006;45(37):11140-11150.
[5] Bauman AT, Yukl ET, Alkevich K, McCormack AL, Blackburn NJ. The hydrogen peroxide reactivity of peptidylglycine monooxygenase supports a Cu(II)-superoxo catalytic intermediate. *J Biol Chem*. 2006;281(7):4190-4198.
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[7] Jones BN, Tamburini PP, Consalvo AP, et al. A fluorometric assay for peptidyl alpha-amidation activity using high-performance liquid chromatography. *Anal Biochem*. 1988;168(2):272-279.

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