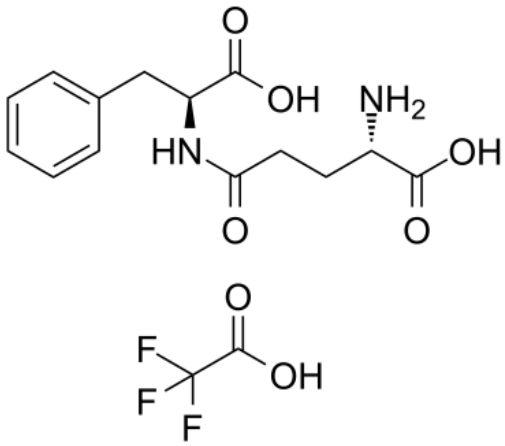
Product Data Sheet

Product Name: γ-Glu-Phe TFA
Cat. No.: GC62081

Chemical Properties

Cas. No.	2828432-42-2		
Formula	$C_{16}H_{19}F_3N_2O_7$	M.Wt	408.33
Solubility	Water : 250 mg/mL (612.25 mM)	Storage	-20°C, protect from 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

γ-Glu-Phe TFA (γ-Glutamylphenylalanine TFA) is synthesized by Bacillus amyloliquefaciens (GBA) and Aspergillus oryzae (GAO). γ-Glu-Phe TFA or the post-enzymatic reaction mixture enhances the umami intensity of commercial soy sauce and model chicken broth[1].

γ-Glu-Phe, γ-Glu-Met and γ-Glu-Val, are identified in sourdough by liquid chromatography-tandem mass spectrometry in MRM mode. γ-Glutamyl dipeptides are found in higher concentrations in sourdough fermented with L. reuteri when compared to the chemically acidified controls. Proteolysis is an important factor for generation of γ-glutamyl dipeptides. Sensory evaluation of bread reveals

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that sourdough bread with higher concentrations of γ-glutamyl dipeptides ranks higher with respect to the taste intensity when compared to regular bread and type I sourdough bread. Sourdough breads fermented with L. reuteri LTH5448 and L. reuteri 100-23 differ with respect to the intensity of the salty taste; this difference corresponds to a different concentration of γ-glutamyl dipeptides[2].

[1]. Yang J, et al. Synthesis and Sensory Characteristics of Kokumi γ-[Glu]n-Phe in the Presence of Glutamine and Phenylalanine: Glutaminase from Bacillus amyloliquefaciens or Aspergillus oryzae as the Catalyst. J Agric Food Chem. 2017 Oct 4;65(39):8696-8703.
[2]. Zhao CJ, et al. Synthesis of Taste-Active γ-Glutamyl Dipeptides during Sourdough Fermentation by Lactobacillus reuteri. J Agric Food Chem. 2016 Oct 12;64(40):7561-7568.

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