

Product Data Sheet

Product Name: γ -Glu-Phe TFA

Cat. No.: GC62081

Chemical Properties

Cas. No. 2828432-42-2

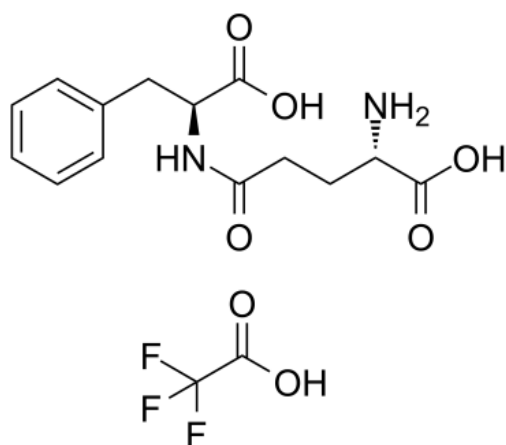
Formula $C_{16}H_{19}F_3N_2O_7$ M.Wt 408.33

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.

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