

# PRODUCT INFORMATION



## Z-Phe-Tyr(tBu)-diazomethylketone

Item No. 27877

CAS Registry No.: 114014-15-2

Formal Name: N-[(1S)-2-[[[(1S)-3-diazo-1-[[4-(1,1-dimethylethoxy)phenyl]methyl]-2-oxopropyl]amino]-2-oxo-1-(phenylmethyl)ethyl]-carbamic acid, phenylmethyl ester

Synonyms: Cbz-Phe-Tyr(O-t-Bu)-CHN<sub>2</sub>,  
Z-Phe-Tyr(tBu)-CHN<sub>2</sub>

MF: C<sub>31</sub>H<sub>34</sub>N<sub>4</sub>O<sub>5</sub>

FW: 542.6

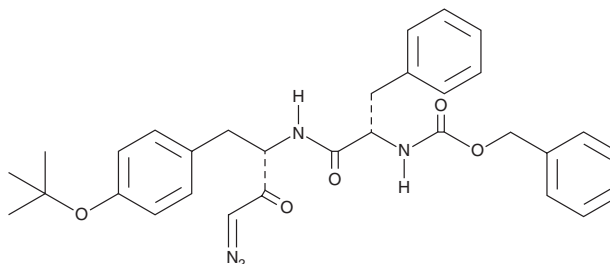
Purity: ≥98%

UV/Vis.: λ<sub>max</sub>: 254 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Z-Phe-Tyr(tBu)-diazomethylketone is supplied as a crystalline solid. A stock solution may be made by dissolving the Z-Phe-Tyr(tBu)-diazomethylketone in the solvent of choice, which should be purged with an inert gas. Z-Phe-Tyr(tBu)-diazomethylketone is soluble in the organic solvent ethyl acetate at a concentration of approximately 10 mg/ml.

### Description

Z-Phe-Tyr(tBu)-diazomethylketone is an inhibitor of cathepsin L ( $K_{\text{inact}} = 200,000 \text{ M}^{-1}\text{s}^{-1}$ ).<sup>1,2</sup> It is selective for cathepsin L over cathepsin S and cathepsin B ( $K_{\text{inact}}$ s = 30 and  $10.3 \text{ M}^{-1}\text{s}^{-1}$ , respectively). Z-Phe-Tyr(tBu)-diazomethylketone is active against bloodstream forms of *T. brucei brucei* clone 427-221a *in vitro* ( $\text{EC}_{50} = 126 \text{ }\mu\text{M}$ ).<sup>3</sup>

### References

1. Shaw, E., Mohanty, S., Colic, A., *et al.* The affinity-labelling of cathepsin S with peptidyl diazomethyl ketones. Comparison with the inhibition of cathepsin L and calpain. *FEBS Lett.* **334**(3), 340-342 (1993).
2. Kirschke, H., Wikstrom, P., and Shaw, E. Active center differences between cathepsins L and B: The S<sub>1</sub> binding region. *FEBS Lett.* **228**(1), 128-130 (1988).
3. Nkemngu, N.J., Grande, R., Hansell, E., *et al.* Improved trypanocidal activities of cathepsin L inhibitors. *Int. J. Antimicrob. Agents* **22**(2), 155-159 (2003).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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