

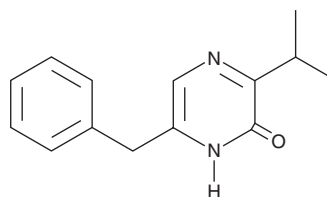
PRODUCT INFORMATION



Aureusimine B

Item No. 18752

CAS Registry No.: 170713-71-0
Formal Name: 3-(1-methylethyl)-6-(phenylmethyl)-2(1H)-pyrazinone
Synonym: Phevalin
MF: C₁₄H₁₆N₂O
FW: 228.3
Purity: ≥95%
Supplied as: A 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

Aureusimine B is supplied as a solid. A stock solution may be made by dissolving the aureusimine B in the solvent of choice, which should be purged with an inert gas. Aureusimine B is slightly soluble in chloroform and methanol.

Description

Aureusimine B, also known as phevalin, is a natural pyrazinone produced by certain fungi and by *Staphylococcus* spp., including *S. aureus*.^{1,2} Its synthesis appears to be initiated by a conserved nonribosomal peptide synthetase that creates a dipeptide (phenylalanine-valine) aldehyde, which then undergoes cyclization and oxidation.² Aureusimine B inhibits calpain in a casein hydrolysis assay (IC₅₀ = 1.3 μM), contributes to *S. aureus* infection in mice, and alters human keratinocyte gene expression.^{1,3,4}

References

1. Alvarez, M.E., White, C.B., Gregory, J., *et al.* Phevalin, a new calpain inhibitor, from a *Streptomyces* sp. *J. Antibiot. (Tokyo)* **48(10)**, 1165-1167 (1995).
2. Zimmermann, M. and Fischbach, M.A. A family of pyrazinone natural products from a conserved nonribosomal peptide synthetase in *Staphylococcus aureus*. *Chem. Biol.* **17(9)**, 925-930 (2010).
4. Secor, P.R., Jennings, L.K., James, G.A., *et al.* Phevalin (aureusimine B) production by *Staphylococcus aureus* biofilm and impacts on human keratinocyte gene expression. *PLoS One* **7(7)**, (2012).
4. Wyatt, M.A., Wang, W., Roux, C.M., *et al.* *Staphylococcus aureus* nonribosomal peptide secondary metabolites regulate virulence. *Science* **329(5989)**, 294-296 (2010).

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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