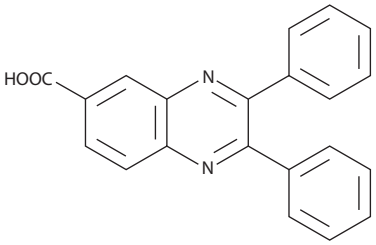
PRODUCT INFORMATION

CAY10567

Item No. 10010233

CAS Registry No.:	32387-96-5
Formal Name:	2,3-diphenyl-6-quinoxalinecarboxylic acid
Synonym:	BML-257
MF:	$C_{21}H_{14}N_2O_2$
FW:	326.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 249, 351 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

CAY10567 is supplied as a crystalline solid. A stock solution may be made by dissolving the CAY10567 in the solvent of choice, which should be purged with an inert gas. CAY10567 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of CAY10567 in these solvents is approximately 0.25 mg/ml, 10 mg/ml, and 20 mg/ml, respectively.

CAY10567 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, CAY10567 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. CAY10567 has a solubility of approximately 0.15 mg/ml in a 1:5 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Akt1, 2, and 3 are serine/threonine protein kinases in the phosphatidylinositol 3 (PI3)-kinase signalling pathway that play a critical role in the regulation of cell proliferation and survival.[1,2] Following recruitment of Akt to the plasma membrane, phosphorylation at threonine 308 and serine 473 (Akt1 numbering) by phosphoinositide-dependent kinases (PDK) 1 and 2 results in full activation of the enzyme. CAY10567 is an Akt1 translocation inhibitor. At a concentration of 12.5 µM, it prevents the translocation of Akt1 by apparently compromising the function of the PH domain. A structurally similar compound inhibits kinase activity *in vitro* with an EC_{50} value of 12 µM by binding to the kinase domain.[3] CAY10567 also inhibits hepatitis C virus (HCV) NS5B RNA-dependent RNA polymerase (RdRp) with an IC_{50} value of 79 µM.[4]

References

1. Vivanco, I. and Sawyers, C.L. The phosphatidylinositol 3-kinase-AKT pathway in human cancer. *Nature Reviews Cancer* **2**, 489-501 (2002).
2. Hennessy, B.T., Smith, D.L., Ram, P.T., *et al.* Exploiting the PI3K/AKT pathway for cancer drug discovery. *Nature Reviews Drug Discovery* **4**, 988-1004 (2005).
3. Lundholt, B.K., Linde, V., Loechel, F., *et al.* Identification of Akt pathway inhibitors using redistribution screening on the FLIPR and the IN cell 3000 analyzer. *Journal of Biomolecular Screening* **10(1)**, 20-29 (2005).
4. Rong, F., Chow, S., Yan, S., *et al.* Structure-activity relationship (SAR) studies of quinoxalines as novel HCV NS5B RNA-dependent RNA polymerase inhibitors. *Bioorganic and Medicinal Chemistry Letters* **17**, 1663-1666 (2007).

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.

WARRANTY AND LIMITATION OF REMEDY
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