

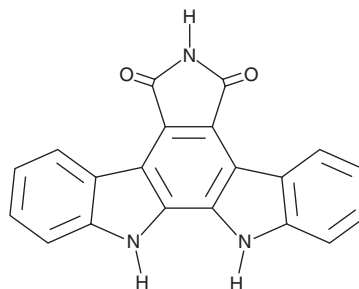
PRODUCT INFORMATION



Arcyriaflavin A

Item No. 13516

CAS Registry No.: 118458-54-1
Formal Name: 12,13-dihydro-5H-indolo[2,3-a]pyrrolo[3,4-c]carbazole-5,7(6H)-dione
MF: $C_{20}H_{11}N_3O_2$
FW: 325.3
Purity: $\geq 95\%$
UV/Vis.: λ_{\max} : 235, 281, 315 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥ 2 years



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

Laboratory Procedures

Arcyriaflavin A is supplied as a crystalline solid. A stock solution may be made by dissolving the arcyriaflavin A in the solvent of choice. Arcyriaflavin A is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of arcyriaflavin A in these solvents is approximately 1 and 5 mg/ml, respectively.

Arcyriaflavin A is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, arcyriaflavin A should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Arcyriaflavin A has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Arcyriaflavin A is an inhibitor of cyclin-dependent kinase 4 (CDK4; $IC_{50} = 140$ nM) and calcium/calmodulin-dependent protein kinase II (CaMKII; $IC_{50} = 25$ nM).¹ It is selective for CDK4 and CaMKII over protein kinase A (PKA) and PKC (IC_{50} s = >2 and >100 μM , respectively). *In vitro*, arcyriaflavin A inhibits replication of human cytomegalovirus (HCMV; $IC_{50} = 200$ nM), as well as proliferation of HCT116 and NCI H460 human carcinoma cells (IC_{50} s = 850 and 590 nM, respectively).^{1,2} It also inhibits proliferation and induces apoptosis of endometriotic cyst stromal cells (ECSCs).³

References

1. Sanchez-Martinez, C., Shih, C., Faul, M.M., et al. Aryl[a]pyrrolo[3,4-c]carbazoles as selective cyclin D1-CDK4 inhibitors. *Bioorg. Med. Chem. Lett.* **13**(21), 3835-3839 (2003).
2. Slater, M.J., Cockerill, S., Baxter, R., et al. Indolocarbazoles: Potent, selective inhibitors of human cytomegalovirus replication. *Bioorg. Med. Chem.* **7**(6), 1067-1074 (1999).
3. Hirakawa, T., Nasu, K., Aoyagi, Y., et al. Arcyriaflavin a, a cyclin D1-cyclin-dependent kinase4 inhibitor, induces apoptosis and inhibits proliferation of human endometriotic stromal cells: A potential therapeutic agent in endometriosis. *Reprod. Biol. Endocrinol.* **15**(1), 53 (2017).

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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