# PRODUCT INFORMATION

## Rutaecarpine

*Item No. 22897*

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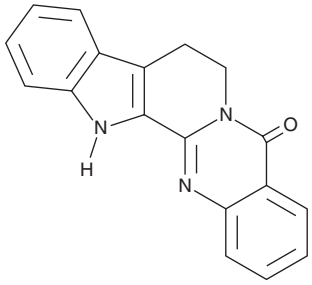
| **CAS Registry No.:** | 84-26-4 |
| **Formal Name:** | 8,13-dihydro-indolo[2',3':3,4] pyrido[2,1-b]quinazolin-5(7H)-one |
| **Synonym:** | NSC 258317 |
| **MF:** | $C_{18}H_{13}N_3O$ |
| **FW:** | 287.3 |
| **Purity:** | ≥98% |
| **UV/Vis.:** | $\lambda_{max}$: 213, 345, 362 nm |
| **Supplied as:** | 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

Rutaecarpine is supplied as a crystalline solid. A stock solution may be made by dissolving the rutaecarpine in the solvent of choice, which should be purged with an inert gas. Rutaecarpine is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of rutaecarpine in these solvents is approximately 12 and 33 mg/ml, repsectively.

### Description

Rutaecarpine is a quinazolinone alkaloid originally isolated from *E. rutaecarpa* that has diverse biological activities.[1] It inhibits COX-1 and COX-2 in BMMC cells ($IC_{50}$s = 8.7 and 0.28 µM, respectively) and is selective for COX-2 in HEK293 cells ($IC_{50}$s = >400 and 2.8 µM, for COX-1 and COX-2, respectively).[2] It slows the growth of cancer cells *in vitro* with $GI_{50}$ values of 8.41-31.6 µM.[1] It also has cardiovascular properties, inducing dose-dependent vasodilation (0.1-10 µM) of precontracted isolated rat aorta and inhibiting platelet aggregation.[3] In addition, rutaecarpine (80 mg/kg) decreases plasma levels of caffeine in rat by inducing its metabolism through the cytochrome P450 (CYP) isoforms CYP1A2 and CYP2E1.[4]

### References


1. Son, J.K., Chang, H.W., and Jahng, Y. Progress in studies on rutaecarpine. II.—Synthesis and structure-biological activity relationships. *Molecules* **20(6)**, 10800-10821 (2015).
2. Moon, T.C., Murakami, M., Kudo, I., *et al*. A new class of COX-2 inhibitor, rutaecarpine from *Evodia rutaecarpa*. *Inflamm. Res*. **48(12)**, 462-465 (1999).
3. Jia, S. and Hu, C. Pharmacological effects of rutaecarpine as a cardiovascular protective agent. *Molecules* **15(3)**, 1873-1881 (2010).
4. Noh, K., Seo, Y.M., Lee, S.K., *et al*. Effects of rutaecarpine on the metabolism and urinary excretion of caffeine in rats. *Arch. Pharm. Res* **34(1)**, 119-125 (2011).





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