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# Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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## Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

## Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand


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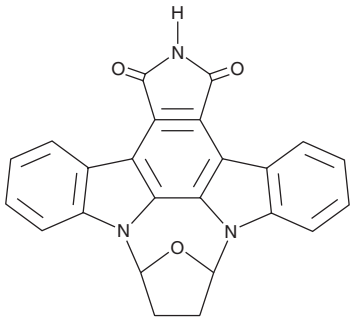
# PRODUCT INFORMATION

## SB 218078

*Item No. 13335*

| | |
|---|---|
| **CAS Registry No.:** | 135897-06-2 |
| **Formal Name:** | 9,10,11,12-tetrahydro-9,12-epoxy-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione |
| **MF:** | $C_{24}H_{15}N_3O_3$ |
| **FW:** | 393.4 |
| **Purity:** | ≥98% |
| **UV/Vis.:** | $\lambda_{max}$: 237, 278, 287, 318, 414 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

SB 218078 is supplied as a crystalline solid. A stock solution may be made by dissolving the SB 218078 in the solvent of choice, which should be purged with an inert gas. SB 218078 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of SB 218078 in these solvents is approximately 5 mg/ml.

SB 218078 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SB 218078 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. SB 218078 has a solubility of approximately 0.3 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

SB 218078 is an inhibitor of checkpoint kinase 1 (Chk1) that blocks phosphorylation of Cdc25 with an $IC_{50}$ value of 15 nM.[1] It less potently inhibits Cdc2 and PKC ($IC_{50}$s = 250 and 1,000 nM, respectively) and causes 85% inhibition of PKD1 at 1 µM.[1,2] SB 218078 releases $G_2$ cell cycle arrest induced by γ-irradiation or the topoisomerase I inhibitor topotecan (Item No. 14129).[1] In this way, SB 218078 enhances the cytotoxicity of DNA-damaging compounds.[3]

### References


1. Jackson, J.R., Gilmartin, A., Imburgia, G., *et al.* An indolocarbazole inhibitor of human checkpoint kinase (Chk1) abrogates cell cycle arrest caused by DNA damage. *Cancer Res.* **60(3)**, 566-572 (2000).
2. Tandon, M., Johnson, J., Li, Z., *et al.* New pyrazolopyrimidine inhibitors of protein kinase d as potent anticancer agents for prostate cancer cells. *PLoS One* **8(9)**, e75601 (2013).
3. Kawabe, T. $G_2$ checkpoint abrogators as anticancer drugs. *Mol. Cancer Ther.* **3(4)**, 513-519 (2004).





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