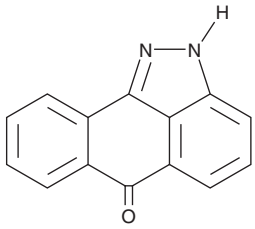
PRODUCT INFORMATION

SP600125

Item No. 10010466

CAS Registry No.:	129-56-6
Formal Name:	anthra[1,9-cd]pyrazol-6(2H)-one
Synonyms:	C.I. 70300, JNK Inhibitor II, c-Jun N-terminal Kinase Inhibitor II, NSC 75890, 1PMV, Pyrazolanthrone, 1,9-Pyrazoloanthrone
MF:	$C_{14}H_8N_2O$
FW:	220.2
Purity:	≥98%
UV/Vis.:	λ_{max}: 230, 265, 300, 336, 399 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

SP600125 is supplied as a crystalline solid. A stock solution may be made by dissolving the SP600125 in the solvent of choice, which should be purged with an inert gas. SP600125 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of SP600125 in ethanol is approximately 0.5 mg/ml and approximately 20 mg/ml in DMSO and DMF.

SP600125 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SP600125 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. SP600125 has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

SP6000125 is a pan-inhibitor of JNK (IC_{50}s = 0.04, 0.04, and 0.09 µM for JNK1, -2, and -3, respectively).[1] It is greater than 300-fold selective for these enzymes over a panel of 17 additional kinases at 10 µM. SP6000125 reduces LPS-induced production of IL-1β, IL-8, and TNF-α in isolated human peripheral blood monocytes, as well as decreases anti-CD3- and anti-CD28-induced production of IFN-γ, TNF-α, and IL-10 induced by in Th1-polarized Jurkat cells, in a concentration-dependent manner. It inhibits LPS-induced production of reactive oxygen species (ROS) in, and NETosis of, isolated human neutrophils when used at a concentration of 10 µM.[2] Intracerebroventricular administration of SP6000125 (30 µg/animal) prevents neuronal death in the CA1 region of the hippocampus in a rat model of transient global ischemia-reperfusion injury induced by four-vessel occlusion.[3]

References

1. Bennett, B.L., Sasaki, D.T., Murray, B.W., *et al.* SP600125, an anthrapyrazolone inhibitor of jun N-terminal kinase. *Proc. Natl. Acad. Sci. USA* **98(24)**, 13681-13686 (2001).
2. Khan, M.A., Farahvash, A., Douda, D.N., *et al.* JNK activation turns on LPS- and gram-negative bacteria-induced NADPH oxidase-dependent suicidal NETosis. *Sci. Rep.* **7(1)**, 3409 (2017).
3. Guan, Q.-H., Pei, D.-S., Zhang, Q.-G., *et al.* The neuroprotective action of SP600125, a new inhibitor of JNK, on transient brain ischemia/reperfusion-induced neuronal death in rat hippocampal CA1 *via* nuclear and non-nuclear pathways. *Brain Res.* **1035(1)**, 51-59 (2005).

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