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## DATASHEET

SP600125

### Product overview

<b>Name</b>	SP600125
<b>Cat No</b>	HB2234
<b>Biological action</b>	Inhibitor
<b>Purity</b>	>98%
<b>Description</b>	Selective, ATP-competitive JNK inhibitor. Prevents BMP9-induced osteogenic MSC differentiation. Maintains stem cells in naive pluripotent state.

### Biological Data

**Biological description** SP600125 is a selective, cell-permeable, reversible and ATP-competitive JNK (c-Jun N-terminal Kinase) inhibitor (IC<sub>50</sub> values are 40-90 μM at JNK1,2,3). SP600125 shows selectivity over a range of other kinases.

SP600125 dose-dependently inhibits phosphorylation of JNK, inhibits expression of the inflammatory genes (COX-2, IL-2, IFN-γ and TNF-α) and prevents apoptosis in many cell types and inhibits autophagy in HeLa cells.

In addition, SP600125 also shows neuronal protective effects and is active *in vivo*.

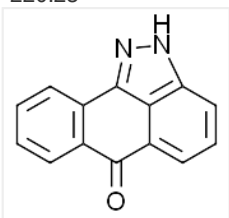
SP600125 is also commonly used as a stem cell modulator which prevents BMP9-induced osteogenic mesenchymal stem cells (MSCs) and primary bone marrow stromal cells differentiation and is frequently used in media to maintain stem cells in naive pluripotent state.

### Solubility & Handling

<b>Storage instructions</b>	-20 °C (desiccate)
<b>Solubility overview</b>	Soluble in DMSO (100mM) or ethanol (5mM, gentle warming)
<b>Important</b>	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

### Chemical Data

<b>Chemical name</b>	Anthra[1-9- <i>cd</i> ]pyrazol-6(2 <i>H</i> )-one
<b>Molecular Weight</b>	220.23
<b>Chemical structure</b>	



<b>Molecular Formula</b>	C <sub>14</sub> H <sub>8</sub> N <sub>2</sub> O
<b>CAS Number</b>	129-56-6
<b>PubChem identifier</b>	8515
<b>SMILES</b>	C1=CC=C2C(=C1)C3=NNC4=CC=CC(=C43)C2=O

<b>InChi</b>	InChI=1S/C14H8N2O/c17-14-9-5-2-1-4-8(9)13-12-10(14)6-3-7-11(12)15-16-13/h1-7H,(H,15,16)
<b>InChiKey</b>	ACPOUJIDANTYHO-UHFFFAOYSA-N
<b>MDL number</b>	MFCD00022289
<b>Appearance</b>	Yellow solid

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## References

### **SP600125, an anthrapyrazolone inhibitor of Jun N-terminal kinase.**

Bennett BL *et al* (2001) Proc Natl Acad Sci U S A 98(24)

**PubMedID** [11717429](#)

### **SP600125, a selective JNK inhibitor, protects ischemic renal injury via suppressing the extrinsic pathways of apoptosis.**

Wang Y *et al* (2007) Life Sci 80(22)

**PubMedID** [17459422](#)

### **SP600125, an anthrapyrazolone inhibitor of Jun N-terminal kinase.**

Bennett BL *et al* (2001) Proc Natl Acad Sci U S A 98(24)

**PubMedID** [11717429](#)

### **Differential Regulation of Evoked and Spontaneous Release by Presynaptic NMDA Receptors**

Abrahamsson *et al* (2017) Neuron 99

**PubMedID** [29033205](#)

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