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DATASHEET

SP600125

Product overview

Name	SP600125
Cat No	HB2234
Biological action	Inhibitor
Purity	>98%
Description	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_{50} 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.

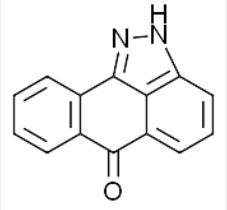
In addition, SP600125 also shows neuronal protective effects and is active *in vivo*.

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

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

Chemical Data

Chemical name	Anthra[1-9-*cd*]pyrazol-6(2*H*)-one
Molecular Weight	220.23
Chemical structure	
Molecular Formula	$C_{14}H_8N_2O$
CAS Number	129-56-6
PubChem identifier	8515
SMILES	C1=CC=C2C(=C1)C3=NNC4=CC=CC(=C43)C2=O

InChi	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)
InChiKey	ACPOUJIDANTYHO-UHFFFAOYSA-N
MDL number	MFCD00022289
Appearance	Yellow solid

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)
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Differential Regulation of Evoked and Spontaneous Release by Presynaptic NMDA Receptors

Abrahamsson et al (2017) Neuron 09
PubMedID 29033205