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DATASHEET

(+)-JQ1

Product overview

Name	(+)-JQ1
Cat No	HB1448
Alternative names	(+)-SGCBD01 | JQ1
Biological action	Inhibitor
Purity	>98%
Description	Potent, selective BET bromodomain inhibitor. Cell permeable.

Biological Data

Biological description

(+)-JQ1 (JQ1) is a potent, selective and cell permeable inhibitor of the BET (Bromodomain and Extra-Terminal domain) protein family.

JQ1 selectively binds the BRD2, BRD3, BRD4 and BRDT bromodomain proteins (IC_{50} values are 17.7, 76.9 and 32.6 nM at BRD2, BRD4(N) and BRD4(C) respectively).

JQ1 shows highest affinity for BRD4. JQ1 displaces BRD4 from chromatin by competitively binding to the acetyl-lysine recognition pocket to inhibit transcription.

JQ1 shows effects on tumour growth and survival, cell cycle arrest and differentiation. It has antitumor and anti-angiogenic properties.

JQ1 shows a short half-life of one hour.

Solubility & Handling

Storage instructions	-20°C
Solubility overview	Soluble in DMSO (100mM) and in ethanol (100mM)
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

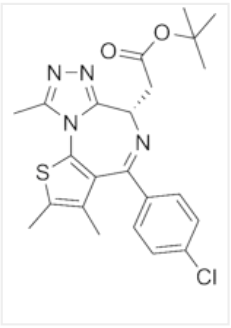
Chemical name

(6*S*)-4-(4-Chlorophenyl)-2,3,9-trimethyl-6*H*-thieno[3,2-*f*][1,2,4]triazolo[4,3-*a*][1,4]di azepine-6-acetic acid 1,1-dimethylethyl ester

Molecular Weight

456.99

Chemical structure



Molecular Formula	$C_{23}H_{25}ClN_4O_2S$
CAS Number	1268524-70-4
PubChem identifier	46907787
SMILES	CC1=C(SC2=C1C(=N[C@H](C3=NN=C(N32)C)CC(=O)OC(C)(C)C)C4=CC=C(C=C4)Cl)C
Source	Synthetic
InChi	InChI=1S/C23H25ClN4O2S/c1-12-13(2)31-22-19(12)20(15-7-9-16(24)10-8-15)25-17(11-18(29)30-23(4,5)6)21-27-26-14(3)28(21)22/h7-10,17H,11H2,1-6H3/t17-/m0/s1
InChiKey	DNVXATUJJDPFDM-KRWDZBQOSA-N
MDL number	MFCD22683748
Appearance	Off-white solid

References

Therapeutic targeting of BET bromodomain proteins in castration-resistant prostate cancer.

Asangani IA *et al* (2014) Nature 510(7504)
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Selective inhibition of BET bromodomains.

Filippakopoulos P *et al* (2010) Nature 468(7327)
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Inhibition of Bromodomain Proteins for the Treatment of Human Diffuse Large B-cell Lymphoma.

Trabucco SE *et al* (2015) Clin Cancer Res 21(1)
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