## Product overview

<table>
<thead>
<tr>
<th>Name</th>
<th>(+)-JQ1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cat No</td>
<td>HB1448</td>
</tr>
<tr>
<td>Biological description</td>
<td>(+)-JQ1 (JQ1) is a potent, selective and cell permeable inhibitor of the BET (Bromodomain and Extra-Terminal domain) protein family.</td>
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</tbody>
</table>

JQ1 selectively binds the BRD2, BRD3, BRD4 and BRDT bromodomain proteins (IC\textsubscript{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.

| Alternative names | (+)-SGCBD01 | JQ1 |
|-------------------|-------------|
| Biological action | Inhibitor   |
| Purity            | >98%        |
Properties

Chemical name: (6S)-4-(4-Chlorophenyl)-2,3,9-trimethyl-6H-thieno[3,2-f][1,2,4]triazolo[4,3-a][1,4]diazepine-6-acetic acid 1,1-dimethylethyl ester

Molecular Weight: 456.99

Chemical structure:

![Chemical structure image]

Molecular Formula: C_{23}H_{25}ClN_{4}O_{2}S

CAS Number: 1268524-70-4

PubChem identifier: 46907787

SMILES: CC1=C(C(C(S(C2=CC(NC3=NN=N(C(N32)C)C=C)C)=O)C(C)(C)C)C4=CC=C(C=C4)Cl)C

Source: Synthetic

InChI: InChI=1S/C_{23}H_{25}ClN_{4}O_{2}S/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)19/h7-10,17H,11H2,1-6H3/t17-/m0/s1

InChIKey: DNVXATUJJDPFD-KRWDZBQOSA-N

MDL number: MFCD22683748

Appearance: Off-white solid

Storing and Using Your Product

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.

References for (+)-JQ1

Therapeutic targeting of BET bromodomain proteins in castration-resistant prostate cancer.
PubMedID: 24759320

Selective inhibition of BET bromodomains.
PubMedID: 20871596
Inhibition of Bromodomain Proteins for the Treatment of Human Diffuse Large B-cell Lymphoma.


PubMedID: 25009295

Inhibition of bromodomain proteins for the treatment of human diffuse large B-cell lymphoma.


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