LKT Laboratories, Inc.

# (+)-JQ-1

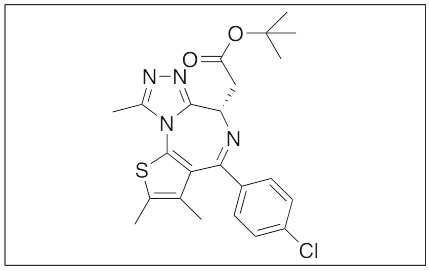
*Phone:* 888-558-5227
651-644-8424
*Fax:* 888-558-7329
*Email:* getinfo@lktlabs.com
*Web:* lktlabs.com

## Product Information

**Product ID** J6400
**CAS No.** 1268524-70-4
**Chemical Name**

**Synonym**

**Formula** $C_{23}H_{25}ClN_4O_2S$
**Formula Wt.** 456.99
**Melting Point** 109.5˚C
**Purity** ≥99%
**Solubility** DMSO 91 mg/mL warmed (199.12 mM)
Ethanol 91 mg/mL (199.12 mM)
Water Insoluble
**Store Temp** -20˚C
**Ship Temp** Ambient




***Bulk quanitites available upon request***

| Product ID | Size |
|---|---|
| J6400 | 1 mg |
| J6400 | 5 mg |
| J6400 | 25 mg |

**Description** JQ-1 is a triazolothienodiazepine compound that inhibits the BET bromodomain (BRD) family of proteins. Although it is a diazepine-like compound, JQ-1 exhibits no sedative or anxiolytic efficacy. JQ-1 was initially in development as a non-hormonal male contraceptive, inhibiting bromodomain testis-specific protein BRDT and chromatin remodeling during spermatogenesis, therefore preventing sperm production. This compound also activates latent HIV-1 in vitro and inhibits T cell proliferation through downregulation of T cell activation signals CD3, CD28, and CXCR4; JQ-1 is currently used as an experimental tool for examining mechanisms of HIV-1 latency. Additionally, JQ-1 exhibits anticancer chemotherapeutic activity in vitro and in vivo; through its inhibition of BRD4, JQ-1 suppresses Myc expression, IL-7R expression, and reduces JAK/STAT phosphorylation, inducing cell cycle arrest and altering survival in a variety of cell lines. Biological bromodomain binding activity comes primarily from (+)-JQ-1; the (-)-JQ-1 stereoisomer does not bind BET bromodomains.

**References**

Cinar M, Rosenfelt F, Rokhsar S, et al. Concurrent inhibition of MYC and BCL2 is a potentially effective treatment strategy for double hit and triple hit B-cell lymphomas. Leuk Res. 2015 Apr 17. [Epub ahead of print]. PMID: 25916698.

Da Costa D, Agathanggelou A, Perry T, et al. BET inhibition as a single or combined therapeutic approach in primary paediatric B-precursor acute lymphoblastic leukaemia. Blood Cancer J. 2013 Jul 19;3:e126. PMID: 23872705.

Ott CJ, Kopp N, Bird L, et al. BET bromodomain inhibition targets both c-Myc and IL7R in high-risk acute lymphoblastic leukemia. Blood. 2012 Oct 4;120(14):2843-52. PMID: 22904298.

Banerjee C, Archin N, Michaels D, et al. BET bromodomain inhibition as a novel strategy for reactivation of HIV-1. J Leukoc Biol. 2012 Dec;92(6):1147-54. PMID: 22802445.

Zuber J, Shi J, Wang E, et al. RNAi screen identifies Brd4 as a therapeutic target in acute myeloid leukaemia. Nature. 2011 Aug 3;478(7370):524-8. PMID: 21814200.

Filippakopoulos P, Qi J, Picaud S, et al. Selective inhibition of BET bromodomains. Nature. 2010 Dec 23;468(7327):1067-73. PMID: 20871596.