

**Product Name:** FK 228

**Catalog No.:** 3515

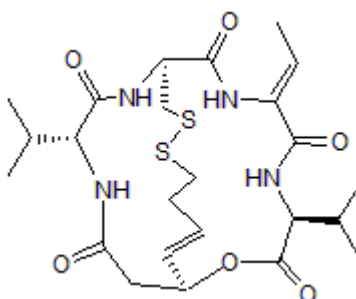
**Batch No.:** 1

**CAS Number:** 128517-07-7

**IUPAC Name:** Cyclo[(2Z)-2-amino-2-butenoyl-L-valyl-(3S,4E)-3-hydroxy-7-mercapto-4-heptenoyl-D-valyl-D-cysteinyl], cyclic (3-5) disulfide

## 1. PHYSICAL AND CHEMICAL PROPERTIES

<b>Batch Molecular Formula:</b>	$C_{24}H_{36}N_4O_6S_2$
<b>Batch Molecular Weight:</b>	540.7
<b>Physical Appearance:</b>	White solid
<b>Solubility:</b>	DMSO to 10 mM
<b>Storage:</b>	Store at -20°C
<b>Batch Molecular Structure:</b>	



## 2. ANALYTICAL DATA

<b>HPLC:</b>	Shows 99.7% purity
<b><sup>1</sup>H NMR:</b>	Consistent with structure
<b>Mass Spectrum:</b>	Consistent with structure

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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 USA & CANADA Tel: (800) 343-7475 EUROPE Tel: +44 (0)1235 529449 CHINA Tel: +86 (21) 52380373  
[www.RnDSystems.com](http://www.RnDSystems.com)

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**Description:**

Potent and selective inhibitor of class I histone deacetylases (HDACs) (IC<sub>50</sub> values are 36, 47, 510 and 14,000 nM for HDAC1, HDAC2, HDAC4 and HDAC6 respectively). Exhibits cytotoxicity against various human tumor cell lines; also exhibits antitumor activity against human tumor xenografts.

**Physical and Chemical Properties:**

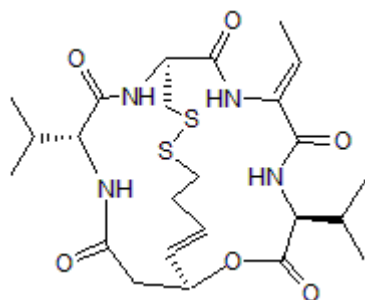
Batch Molecular Formula: C<sub>24</sub>H<sub>36</sub>N<sub>4</sub>O<sub>6</sub>S<sub>2</sub>

Batch Molecular Weight: 540.7

Physical Appearance: White solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**Storage:** Store at -20°C

**Solubility & Usage Info:**

DMSO to 10 mM

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**

**Furumai et al** (2002) FK228 (depsipeptide) as a natural prodrug that inhibits class I histone deacetylases. *Cancer Res.* **62** 4916. PMID: 12208741.

**Sasakawa et al** (2003) Effects of FK228, a novel histone deacetylase inhibitor, on tumor growth and expression of p21 and c-myc genes in vivo. *Cancer Lett.* **195** 161. PMID: 12767524.

**Matsubara et al** (2009) Involvement of extracellular signal-regulated kinase activation in human osteosarcoma cell resistance to the histone deacetylase inhibitor FK228 [(1S,4S,7Z,10S,16E,21R)-7-ethylidene-4,21-bis(propan-2-yl)-2-oxa-12,13-dithia-5,8,20,23-tetraazabicyclo[8.7.6]tricos-16-ene-3,6,9,19,22-pentone]. *J.Pharmacol.Exp.Ther.* **328** 839. PMID: 19073909.

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