JNK-IN-8

JNK1, JNK2, and JNK3 inhibitor

JNK-IN-8 is a selective and irreversible inhibitor of c-Jun N-terminal kinases (JNK1, JNK2, and JNK3). It effectively inhibits JNK activity with IC50 values of 4.7 nM, 18.7 nM, and 1 nM, respectively. JNK-IN-8 forms a covalent bond with a conserved cysteine residue in the JNK active site, leading to a conformational change that blocks substrate binding.

This compound is widely used in research to study JNK-related signaling pathways, including stress responses, apoptosis, and T cell differentiation. Its high specificity and potency make it a valuable tool for investigating the role of JNK in various cellular processes.

Key features and applications include:

- **Selective and Irreversible Inhibition:** JNK-IN-8 is a highly selective and irreversible inhibitor of c-Jun N-terminal kinases (JNK1, JNK2, and JNK3) with IC50 values of 4.67 nM, 18.7 nM, and 0.98 nM, respectively. In cancer research, JNK-IN-8 is used to study the role of JNK signaling in cancer cell proliferation, survival, and apoptosis.
- **Covalent Binding:** It forms covalent bonds with a conserved cysteine residue in the JNK enzymes, leading to a conformational change that blocks substrate binding and inhibits kinase activity.
- **Specificity:** JNK-IN-8 exhibits high specificity for JNK1/2/3 and does not significantly inhibit other kinases.

Relevant disease states include:

- **Cancer:** JNK-IN-8 has been shown to suppress tumor growth in various cancers, including triple-negative breast cancer (TNBC) and colorectal cancer.
- **Inflammatory Diseases:** Dysregulated JNK signaling is associated with inflammatory conditions, making JNK-IN-8 relevant in research on diseases like rheumatoid arthritis and inflammatory bowel disease.
- **Neurodegenerative Diseases:** JNK-IN-8 is studied for its potential in treating neurodegenerative diseases such as Alzheimer's and Parkinson's diseases.

- GMP format available

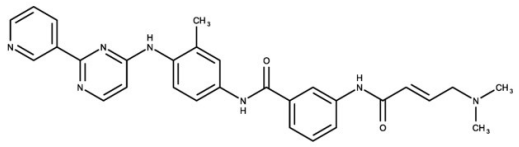
Ordering Information

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ENZ-CHM339-0025	25mg

Manuals, SDS & CofA

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Handling & Storage

Use/Stability	As indicated on product label or CoA when stored as recommended. Solutions in DMSO may be stored at -20°C for up to 3 months.
Handling	Keep container tightly closed in a dry and well-ventilated place.
Short Term Storage	-20°C
Long Term Storage	-20°C
Shipping	Ambient Temperature

Regulatory Status

RUO - Research Use Only

Product Details

Alternative Name	3-[[4-(Dimethylamino)-1-oxo-2-buten-1-yl]amino]-N-[3-methyl-4-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]phenyl]benzamide, JNK Inhibitor XVI
Appearance	Pale yellow solid.
CAS	1410880-22-6
Couple Target	Jnk
Couple Type	Inhibitor
Formula	$C_{29}H_{29}N_7O_2$
Identity	Determined by NMR.
MW	507.6
Purity	≥98% (HPLC)
Solubility	Soluble in DMSO (45 mg/ml).

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