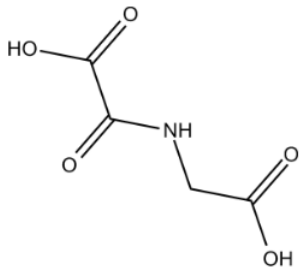
N-Oxalylglycine

Technical literature is available at: www.mesgenbio.com. E-mail MesGen Technical Services if you have questions on use of this system: tech@mesgenbio.com

Catalog Number : MG5239
CAS : 5262-39-5
Molecular Weight : 147.1
Molecular Formula : C4H5NO5
Purity (HPLC)(%) ≥ 98
Physical Appearance: A crystalline solid

Packaging Size : 10mg ☐ 50mg ☐



Description

N-Oxalylglycine, as known as NOG, is a cell permeable inhibitor of α-ketoglutarate-dependent enzymes which include JMJD2A, JMJD2C, and JMJD2E. NOG also blocks the prolyl hydroxylase domain-containing proteins PHD1 and PHD2. Demethylation of the methylated forms of histone 3 lysine 9 (H3K9) and H3K36 can be catalyzed by JMJD2 subfamily of histone demethylases. Since histone demethylases are related to certain diseases, including cancer, selective inhibitors functions as anticancer agents and potential tools for clarifying the biological functions of JMJDs.

In vitro: NOG was identified as a natural product and presented in plants, including Rheum rhabarbarum (rhubarb) and Spinach oleracea (spinach) leaves. However, there was no NOG observed human embryonic kidney cells (HEK 293T) or Escherchia coli. NOG regulated gene expression via blocking 2-Oxoglutarate-dependent oxygenases.

In vivo: Up to now, in vivo study of NOG is still in the development stage.

IC50: 250 μM: inhibits α-ketoglutarate-dependent enzyme jumonji domain-containing protein 2 (JMJD2) A.
IC50: 500 μM: blocks α-ketoglutarate-dependent enzyme JMJD2C.
IC50: 24 μM: dampens α-ketoglutarate-dependent enzyme JMJD2E.
IC50: 2.1 μM: suppresses the prolyl hydroxylase domain-containing proteins PHD1.
IC50: 5.6 μM: depresses the prolyl hydroxylase domain-containing proteins PHD2.

Solubility

≤10mg/ml in ethanol;10mg/ml in DMSO;5mg/ml in dimethyl formamide

Storage Condition

-20°C

For Research Use Only. Not For Use In Diagnostic Procedures.

MesGen Biotechnology **Tel : 86-21-56620378** | **China (mainland)**
tech@mesgenbio.com | **www.mesgenbio.com**