N-(5-Aminopentyl)acetamide

Cat. No.: HY-101403

CAS No.: 32343-73-0

Molecular Formula: $C_7H_{16}N_2O$

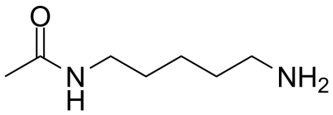
Molecular Weight: 144.21

Target: Endogenous Metabolite

Pathway: Metabolic Enzyme/Protease

Storage:

Pure form	-20°C	3 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 30 mg/mL (208.03 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	6.9343 mL	34.6717 mL	69.3433 mL
	5 mM	1.3869 mL	6.9343 mL	13.8687 mL
	10 mM	0.6934 mL	3.4672 mL	6.9343 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

N-(5-Aminopentyl)acetamide is the acetylated form of the polyamine cadaverine.

IC_{50} & Target

Human Endogenous Metabolite

In Vitro

Polyamine is a small organic polycation composed of a hydrocarbon backbone with multiple amino groups which ubiquitously exists in all living organisms from bacteria to higher animals. The critical step of polyamine biosynthesis generally includes the amino acid-decarboxylating reaction to produce the primary diamines, such as cadaverine from lysine. Synthesized polyamines are implicated in a wide variety of cytoplasmic reactions such as DNA replication and protein synthesis, and are essential for proper growth and proliferation of the organisms[1]. Cadaverine is a linear molecule that terminate at both ends with an amine functional group. These functional groups confer to the molecules multiple positive charges at physiological pH. Cadaverine is produced through the action of basic amino acid decarboxylases and is found associated with the outer membrane[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Kojima S, et al. Molecular basis for the maintenance of envelope integrity in Selenomonas ruminantium:cadaverine biosynthesis and covalent modification into the peptidoglycan play a major role. J Nutr Sci Vitaminol (Tokyo). 2012;58(3):153-60.

[2]. Dela Vega AL, et al. Polyamines decrease Escherichia coli outer membrane permeability.

Caution: Product has not been fully validated for medical applications. For research use only.

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