5-Amino-1MQ

NNMT Inhibitor | Small Molecule | 5-amino-1-methylquinolinium

COMPOUND OVERVIEW

5-Amino-1MQ is a selective, membrane-permeable inhibitor of Nicotinamide N-methyltransferase (NNMT), a cytosolic enzyme involved in NAD+ metabolism and energy homeostasis. NNMT overexpression is associated with adipogenesis and metabolic dysfunction in animal models.

MECHANISM OF ACTION

By inhibiting NNMT, 5-Amino-1MQ increases intracellular NAD+ and S-adenosylmethionine (SAM) availability. Elevated NAD+ activates SIRT1, a deacetylase involved in mitochondrial biogenesis and fat oxidation. This pathway operates at the enzymatic level rather than through adrenergic mechanisms.

RESEARCH APPLICATIONS

- NNMT enzyme inhibition pharmacology
- NAD+ metabolism and SIRT1 activation research
- Adipogenesis and muscle catabolism model studies
- Metabolic rate modulation without CNS stimulation research

EVIDENCE STATUS & KNOWN LIMITATIONS

> ***Evidence Status:*** *Research is predominantly preclinical with promising rodent model data. No controlled human trials have been published. NNMT inhibition as a therapeutic target is an active area of investigation. Translation from rodent models to human physiology is not yet established.*

ANALYTICAL & STORAGE DATA

PURITY	**>99.2% by HPLC/MS**	PHYSICAL FORM	**Lyophilised Powder**
STORAGE	**Cool, dark environment**	CLASS	**Small Molecule / NNMT Inhibitor**
RECONSTITUTION	**Bacteriostatic Water (USP)**	BATCH DOCS	**Available on Request**

RECONSTITUTION NOTE

A stable small molecule. Introduce reconstitution solvent slowly against the vial wall. Gentle swirling (not shaking) may be used to achieve clarity. Refrigerate post-reconstitution.

REGULATORY CLASSIFICATION: All BioUnfolding compounds are strictly intended for laboratory evaluation and in-vitro analysis. These materials are not intended for human consumption, veterinary use, or therapeutic application. Researchers are solely responsible for compliance with applicable local regulations including SAHPRA guidelines.

REQUEST BATCH DOCUMENTATION WhatsApp: +27 68 321 3641 | www.biounfolding.co.za | Cape Town, South Africa