Small Molecules

Suramin

Tryosine kinase inhibitor and epigenetic modifier; Inhibits PDGF, FGF, EGF, TGFβ, SIRT1, and SIRT5

Catalog # 73872

100 mg

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Product Description

Suramin is a bis-polysulfonated naphthylurea that can bind to and inhibit PDGF, FGF, EGF, TGF-β, SIRT1, and SIRT5 (Stein). Suramin also blocks G protein binding to G protein-coupled receptors (GPCRs), inhibits the binding of calmodulin to recognition sites on the ryanodine receptor-1 (IC_{50} = 4.9 µM), and non-selectively antagonizes P2X and P2Y purinergic receptors (10 - 100 µM; Klinger et al.; Charlton et al.). This product is supplied as the sodium salt of the molecule.

Molecular Name: Suramin (Sodium Salt)

Alternative Names: BAY 205; Germanin; NF 060

CAS Number: 129-46-4

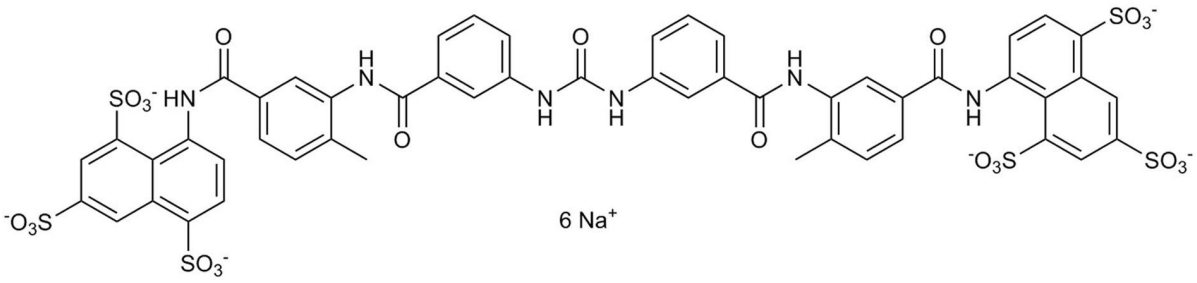
Chemical Formula: $C_{51}H_{34}N_6O_{23}S_6 \cdot 6Na$

Molecular Weight: 1429.1 g/mol

Purity: ≥ 98%

Chemical Name: 8,8'-[carbonylbis[imino-3,1-phenylenecarbonylimino(4-methyl-3,1-phenylene)carbonylimino]]bis-1,3,5-naphthalenetrisulfonic acid, hexasodium salt

Structure:



Properties

Physical Appearance: A white to off-white solid

Storage: Product stable at room temperature as supplied. Protect product from prolonged exposure to light. For long-term storage store with a desiccant.
Stable as supplied for 12 months from date of receipt.

Solubility: · Water ≤ 100 mM
For example, to prepare a 10 mM stock solution in water, resuspend 10 mg in 700 µL of water.

Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in water at -20°C. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application.

For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use.

Published Applications

DISEASE MODELING
· Attenuates fibrosis in limb muscles in mouse model of Duchenne's muscular dystrophy (Taniguti et al.).
CANCER RESEARCH
· Inhibits angiogenesis and growth of various tumors and human cancer cell lines (McGreary et al.; Zaniboni; Stein).
IMMUNOLOGY
· Competitive inhibitor of reverse transcriptase and protects T lymphocytes against human immunodeficiency virus (HIV) infection in vitro (Carteau et al.).
· Kills human African trypanosomiasis parasites, potentially through preferential binding to parasite glycolytic enzymes (Fairlamb & Bowman; Barrett et al.).

References

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Taniguti APT et al. (2011) Prevention of muscle fibrosis and myonecrosis in mdx mice by suramin, a TGF-β1 blocker. Muscle Nerve 43(1): 82–7.
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Related Small Molecules

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This product is hazardous. Please refer to the Safety Data Sheet (SDS).