PRODUCT INFORMATION

Suramin (sodium salt)
Item No. 11126

CAS Registry No.: 129-46-4
Formal Name: \(8,8'\text{-[carbonylbis\{imino-3,1-}
\text{phenylene}\text{carbonylimino}4\text{-methyl-}
3,1\text{-phenylene}\text{carbonylimino}\}]\text{bis-}
\text{1,3,5-naphthalenetrisulfonic acid,}
\text{hexasodium salt}\)

Synonyms: BAY 205, Germanin, NF 060

MF: \(\text{C}_{51}\text{H}_{34}\text{N}_{6}\text{O}_{23}\text{S}_{6} \cdot 6\text{Na}\)
FW: 1,429.1

Purity: \(\geq 98\%\)

Stability: \(\geq 2\) years at room temperature

Supplied as: A white to off-white powder

Laboratory Procedures

For long term storage, we suggest that suramin (sodium salt) be stored as supplied at room temperature. It should be stable for at least two years.

Suramin (sodium salt) is supplied as a white to off-white powder. A stock solution may be made by dissolving the suramin (sodium salt) in the solvent of choice. Suramin (sodium salt) is soluble in the organic solvent DMSO, which should be purged with an inert gas. It is also soluble in water. We do not recommend storing the aqueous solution for more than one day.

Description

Suramin is a polysulfonated naphthylurea that inhibits the binding of calmodulin to recognition sites on the ryanodine receptor-1 \(\text{IC}_{50} = 4.9\ \mu\text{M}\), blocks \(G\) protein coupling to GPCRs, and non-selectively antagonizes \(P_{2}\) purinergic receptors \(10-100\ \mu\text{M}\).\(^1\)\(^2\) Suramin also acts as a non-specific competitor of glycosaminoglycan binding to a variety of targets including TGF\(\beta\), PDGF, and FGF and additionally inhibits insulin-like growth factor-I, EGF, PKC activity, TNF, IL-2, transferrin, and Apo-B.\(^3\) While originally used as an early stage treatment of trypanosome-caused onchocerciasis (African river blindness) and African trypanosomiasis (African sleeping sickness), suramin has been under clinical evaluation for its potential to regress a number of cancer cell lines, including non-small cell lung cancer, advanced breast cancer, hormone refractory prostate cancer, metastatic renal cell cancer, colorectal cancer, and high-grade gliomas.\(^3\)\(^-\)\(^5\)

References