Product Name: **NF 110** **Catalog No.: 2548** **Batch No.: 3**

CAS Number: 111150-22-2

IUPAC Name: 4,4',4",4"'-[Carbonyl*bis*[imino-5,1,3-benzenetriyl*bis*(carbonylimino)]]tetrakisbenzenesulfonic acid tetrasodium salt

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{41}H_{28}N_6Na_4O_{17}S_4.11H_2O$

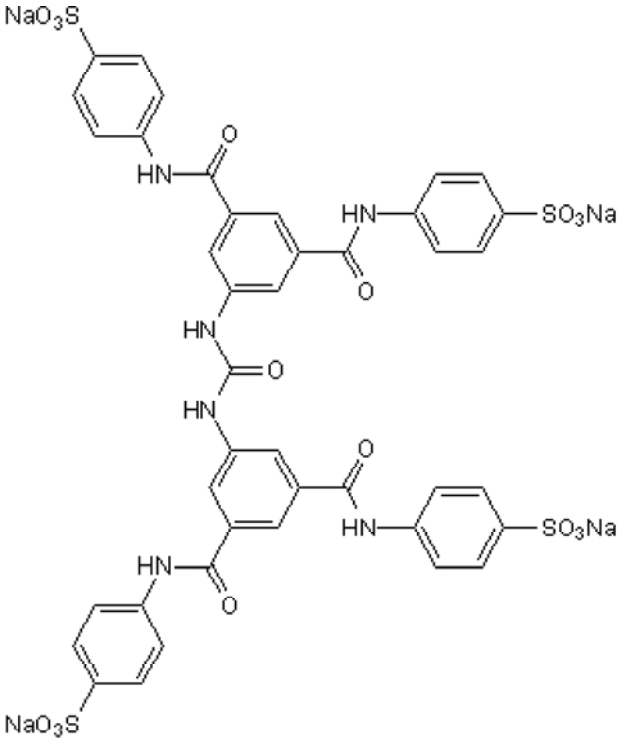
Batch Molecular Weight: 1295.0177

Physical Appearance: Off White solid

Solubility: water to 40 mM

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 94.1% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	38.03		6.49
Found	37.71		6.26

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Description:

High affinity $P2X_3$ receptor antagonist (K_i values are 36, 82 and 4144 nM for $P2X_3$, $P2X_1$ and $P2X_2$ recombinant receptors respectively). Shows no activity at $P2Y_1$, $P2Y_2$ and $P2Y_{11}$ receptors (IC_{50} > 10 µM). Potently inhibits α,β-meATP-evoked desensitizing currents in rat DRG neurons (IC_{50} = 527 nM). Shows antitumor activity against several tumor types. Also inhibits DNA-binding activity of HMGA2 (IC_{50} = 0.87 µM).

Physical and Chemical Properties:

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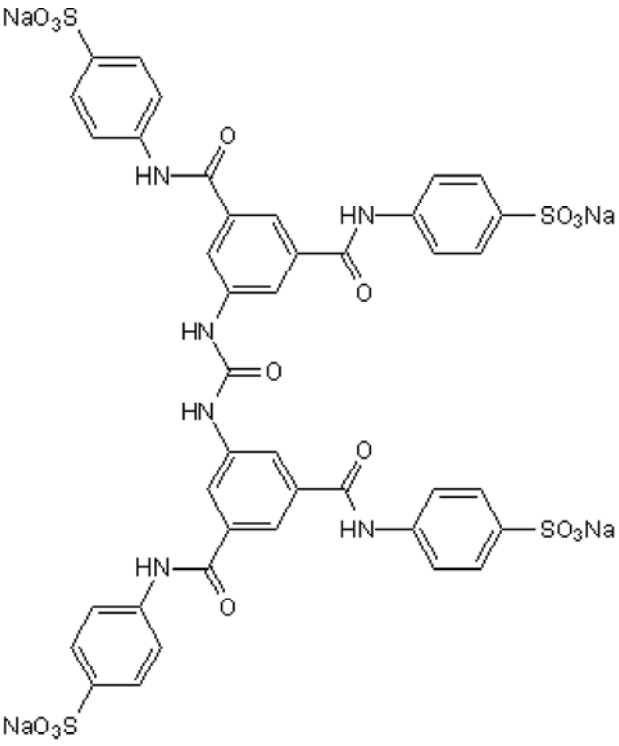

Storage: Desiccate at RT

Solubility & Usage Info:

water to 40 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Su *et al* (2020) Identification of HMGA2 inhibitors by AlphaScreen-based ultra-high-throughput screening assays. Sci Rep ***10*** 18850. PMID: 33139812.

Hausmann *et al* (2006) The suramin analog 4,4',4'',4'''-(Carbonylbis(imino-5,1,3-benzenetriylbis (carbonylimino)))tetra-kis-benzenesulfonic acid (NF110) potently blocks P2X3 receptors: subtype selectivity is determined by location of sulfonic Mol.Pharmacol. ***69*** 2058. PMID: 16551782.

Kassack *et al* (2004) Structure-activity relationships of analogues of NF449 at human P2X1 receptors: the most potent and selective known $P2X_1$ receptor antagonist. Eur.J.Med.Chem. ***39*** 345. PMID: 15072843.