

# PRODUCT INFORMATION



## NF449 (sodium salt)

Item No. 13324

**CAS Registry No.:** 627034-85-9  
**Formal Name:** 4,4',4'',4'''-[carbonylbis(imino-5,1,3-benzenetriylbis(carbonylimino))]tetrakis-1,3-benzenedisulfonic acid, octasodium salt

**MF:** C<sub>41</sub>H<sub>24</sub>N<sub>6</sub>O<sub>29</sub>S<sub>8</sub> • 8Na

**FW:** 1,505.1

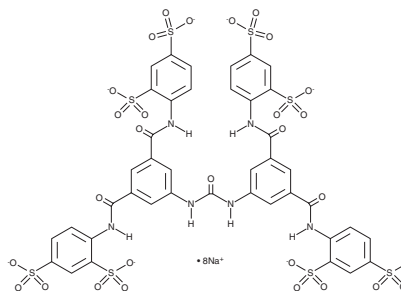
**Purity:** ≥95%

**UV/Vis.:** λ<sub>max</sub>: 277 nm

**Supplied as:** A crystalline solid

**Storage:** -20°C

**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

NF449 (sodium salt) is supplied as a crystalline solid. Aqueous solutions of NF449 (sodium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of NF449 (sodium salt) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

NF449 is an analog of suramin that selectively inhibits P2X<sub>1</sub> purinergic receptors (pIC<sub>50</sub> = 6.3) with a potency 19-fold greater than at P2X<sub>3</sub>, P2Y<sub>1</sub>, P2Y<sub>2</sub>, or P2Y<sub>11</sub>.<sup>1,2</sup> Through selective inhibition of the P2X<sub>1</sub> receptor, 10 mg/kg NF449 has been used to decrease intravascular platelet aggregation in a mouse model of systemic thromboembolism.<sup>3</sup> NF449 has also demonstrated selective antagonism of the G<sub>sa</sub>-subunit G protein, which suppresses the association rate of GTPγS binding to G<sub>sa-s</sub>, inhibits the stimulation of adenylyl cyclase activity, and blocks G protein coupling to certain GPCRs.<sup>4</sup>

### References

1. Kassack, M.U., Braun, K., Ganso, M., *et al.* Structure-activity relationships of analogues of NF449 confirm NF449 as the most potent and selective known P2X<sub>1</sub> receptor antagonist. *Eur. J. Med. Chem.* **39(4)**, 345-357 (2004).
2. El-Ajouz, S., Ray, D., Allsopp, R.C., *et al.* Molecular basis of selective antagonism of the P2X<sub>1</sub> receptor for ATP by NF449 and suramin: Contribution of basic amino acids in the cysteine-rich loop. *Br. J. Pharmacol.* **165(2)**, 390-400 (2012).
3. Hechler, B., Magnenat, S., Zighetti, M.L., *et al.* Inhibition of platelet functions and thrombosis through selective or nonselective inhibition of the platelet P<sub>2</sub> receptors with increasing doses of NF449 [4,4',4'',4'''-(carbonylbis(imino-5,1,3-benzenetriylbis(carbonylimino)))tetrakis-benzene-1,3-disulfonic acid octasodium salt]. *J. Pharmacol. Exp. Ther.* **314(1)**, 232-243 (2005).
4. Hohenegger, M., Waldhoer, M., Beindl, W., *et al.* G<sub>sa</sub>-selective G protein antagonists. *Proc. Natl. Acad. Sci. USA* **95(1)**, 346-351 (1998).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897

[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM