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Zuschläge

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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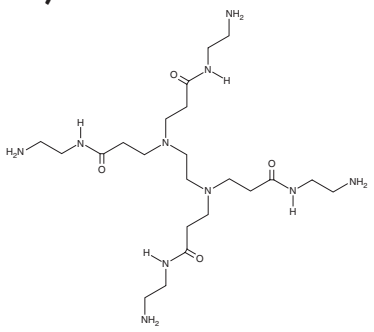
PRODUCT INFORMATION

PAMAM Dendrimer G0.0 Amine (water solution)

Item No. 39053



CAS Registry No.: 155773-72-1
Formal Name: 3,3′,3′′,3′′′-(1,2-ethanediyldinitrilo)tetrakis[N-(2-aminoethyl)-propanamide
Synonyms: PAMAM G0.0, Polyamidoamine Dendrimer G0.0
MF: $C_{22}H_{48}N_{10}O_4$
FW: 516.7
Supplied as: A solution in water
Storage: -20°C
Stability: ≥2 years

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

Description

PAMAM dendrimer G0.0 amine (PAMAM G0.0) is the polyamidoamine (PAMAM) core with amine termini on which other PAMAM dendrimers are synthesized.[1] It is approximately 15 Å in diameter and has 4 surface groups. PAMAM G0.0 is an antagonist for the pore-forming channels anthrax toxin protective antigen 63 (PA63; IC_{50} = 231 nM) and *C. botulinum* C2 toxin subunit C2IIa (IC_{50} = 940 nM) in lipid membranes.[2] It reduces C2 toxin-induced death in HeLa cells when used at concentrations of 10 and 20 µM. PAMAM G0.0 is a chelator of nickel.[3] In complex with polysulfone membrane-bound chitosan, PAMAM G0.0 selectively captures and stores carbon dioxide (CO_2) over nitrogen (N_2) in a gas-feed system.[4] PAMAM G0.0 has been used in the synthesis of PAMAM dendrimer G0.5 carboxylate (Item No. 39104) and PAMAM dendrimer G1.0 amine (Item No. 39054).[3]

References

1. Heiden, T.C., Dengler, E., Kao, W.J., *et al.* Developmental toxicity of low generation PAMAM dendrimers in zebrafish. *Toxicol. Appl. Pharmacol.* **225(1),** 70-79 (2007).
2. Förstner, P., Bayer, F., Kalu, N., *et al.* Cationic PAMAM dendrimers as pore-blocking binary toxin inhibitors. *Biomacromolecules* **15(7),** 2461-2474 (2014).
3. Sohail, I., Bhatti, I.A., Ashar, A., *et al.* Polyamidoamine (PAMAM) dendrimers synthesis, characterization and adsorptive removal of nickel ions from aqueous solution. *J. Mater. Res. Technol.* **9(1),** 498-506 (2020).
4. Duan, S., Kouketsu, T., Kazama, S., *et al.* Development of PAMAM dendrimer composite membranes for CO_2 separation. *J. Memb. Sci.* **283(1-2),** 2-6 (2006).

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