

PRODUCT INFORMATION



PAMAM Dendrimer G2.0 Amine (water solution)

Item No. 39072

CAS Registry No.:	26937-01-9	
Formal Name:	2-propenoic acid, polymer with 1,2-ethanediamine, methyl ester	
Synonyms:	PAMAM G2.0, Polyamidoamine Dendrimer G2.0	
MF:	$[\text{NH}_2(\text{CH}_2)_2\text{NH}_2]_n(\text{G}=n)$; dendri PAMAM $(\text{NH}_2)_{16}$	$[\text{NH}_2(\text{CH}_2)_2\text{NH}_2]_n(\text{G}=n)$; dendri PAMAM $(\text{NH}_2)_{16}$
FW:	3,256.2	
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 G2.0 amine (PAMAM G2.0) is a polyamidoamine (PAMAM) dendrimer with amine termini.¹ It is approximately 29 Å in diameter and has 16 surface groups. PAMAM G2.0 (15 mg/ml) in combination with erythromycin (Item No. 16486) enhances the solubility and antibacterial activity of erythromycin against *S. aureus*.² It increases the cell growth rate of HEK293T and HeLa cells when used at concentrations ranging from 100 to 500 nM but is cytotoxic to the same cells when used at concentrations greater than or equal to 700 nM.³ *In vivo*, PAMAM G2.0 when administered in combination with fluorescein isothiocyanate-labeled dextran enhances its nasal absorption in rats.⁴

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. Winnicka, K., Wroblewska, M., Wieczorek, P., *et al.* The effect of PAMAM dendrimers on the antibacterial activity of antibiotics with different water solubility. *Molecules* **18(7)**, 8607-8617 (2013).
3. Parimi, S., Barnes, T.J., Callen, D.F., *et al.* Mechanistic insight into cell growth, internalization, and cytotoxicity of PAMAM dendrimers. *Biomacromolecules* **11(2)**, 382-389 (2010).
4. Dong, Z., Katsumi, H., Sakane, T., *et al.* Effects of polyamidoamine (PAMAM) dendrimers on the nasal absorption of poorly absorbable drugs in rats. *Int. J. Pharm.* **393(1-2)**, 244-252 (2010).

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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