

Technical Bulletin

Polyester-32-hydroxyl-1-carboxyl bisMPA dendron, generation 5

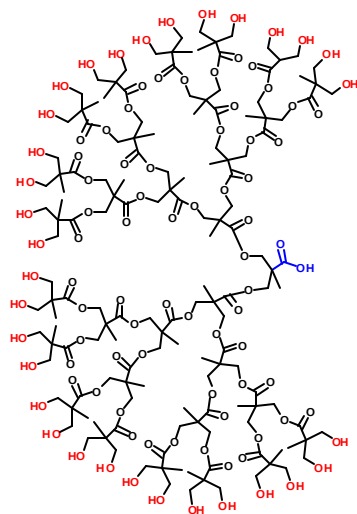
Catalog Number **686654**

Storage Temperature 2–8 °C

Technical Bulletin AL-244

Synonym: Dendron-G5-Carboxyl-OH

Product Description



Theoretical MW: 3,617.59 g/mol

Average Molecular Formula: C₁₅₅H₂₅₀O₉₄

Number of hydroxyl groups: 32

Number of carboxylic acid groups: 1

This monodisperse compound has multiple surface hydroxyl groups and a single carboxylic acid focal point function. The carboxylic acid function is well suited for EDC-mediated coupling to amine-containing reagents. The hydroxyl groups are selectively reactive with anhydrides or acyl halides (see Figure 1). It is transparent to light in the UV/Vis wavelength region.

The product is a freeze-dried, white powder, which may contain traces of methanol or ether.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

The product is soluble in polar organic solvents (THF, DMSO, DMF, and methanol) and water.

Storage/Stability

Polyester dendrons are susceptible to hydrolysis, which is accelerated when material is dissolved in water, at acidic/basic pH, or at elevated temperatures. For extended storage, store the dry powder at 2–8 °C.

References

EDC-mediated couplings:

- Desai, M.C., and Stramiello, L.M.S., Polymer Bound EDC (P-EDC): A Convenient Reagent for Formation of an Amide Bond. *Tetrahedron Letters*, **34**, 7685-7866 (1993).
- Xu, Y., and Miller, M.J., Total Syntheses of Myobactin Analogues as Potent Antimycobacterial Agents Using a Minimal Protecting Group Strategy. *J. Org. Chem.*, **63**, 4314-4322 (1998).
- Futami, J. et al., Preparation of Potent Cytotoxic Ribonucleases by Cationization. Enhanced Cellular Uptake and Decreased Interaction with Ribonuclease Inhibitor by Chemical Modification of Carboxyl Group. *Biochemistry*, **40**, 7518-7524 (2001).

Related Products

Polyester-8-hydroxyl-1-carboxyl bis-MPA dendron, generation 3 (Catalog Number 686670)

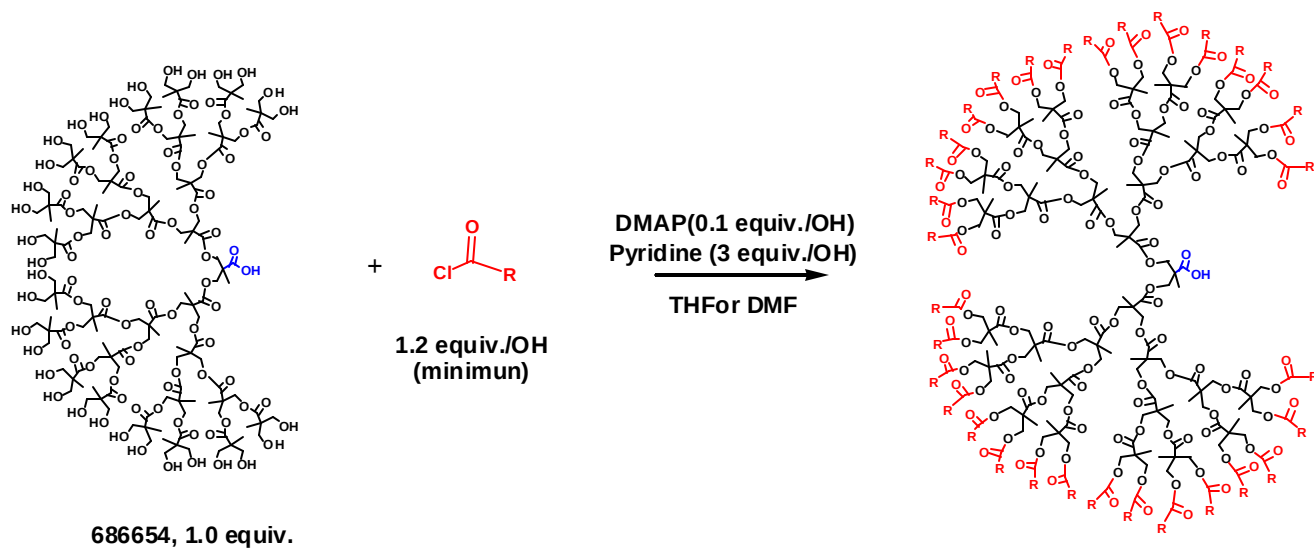
Polyester-16-hydroxyl-1-carboxyl bis-MPA dendron, generation 5 (Catalog Number 686662)

EDC, *N*-(3-Dimethylaminopropyl)-*N*'-ethylcarbodiimide hydrochloride (Catalog Number E1769)

Manufactured by Polymer Factory Sweden AB.

IK,MAM 09/07-1

Figure 1.
Reaction Scheme



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