

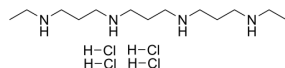
## N1,N11-Diethylnorspermine (tetrahydrochloride)

Cat. No.: HY-13610A  
 CAS No.: 156886-85-0  
 Batch No.: 101509  
 Chemical Name: 1,3-Propanediamine, N1,N3-bis[3-(ethylamino)propyl]-, hydrochloride (1:4)

### PHYSICAL AND CHEMICAL PROPERTIES

Molecular Formula:  $C_{13}H_{36}Cl_4N_4$   
 Molecular Weight: 390.26  
 Storage: 4°C, sealed storage, away from moisture  
 \* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

### Chemical Structure:



### ANALYTICAL DATA

Appearance: White to off-white (Solid)  
 $^1H$  NMR Spectrum: Consistent with structure  
 MS: Consistent with structure  
 Purity (NMR):  $\geq 98.0\%$   
 Conclusion: The product has been tested and complies with the given specifications.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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