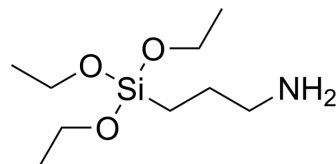


## 3-Aminopropyltriethoxysilane

Cat. No.:	HY-D0175
CAS No.:	919-30-2
Molecular Formula:	C <sub>9</sub> H <sub>23</sub> NO <sub>3</sub> Si
Molecular Weight:	221.37
Target:	Biochemical Assay Reagents
Pathway:	Others
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



### SOLVENT & SOLUBILITY

#### In Vitro

H<sub>2</sub>O : ≥ 100 mg/mL (451.73 mM)  
\* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent		1 mg	5 mg	10 mg
	Concentration	Mass			
	1 mM		4.5173 mL	22.5866 mL	45.1732 mL
	5 mM		0.9035 mL	4.5173 mL	9.0346 mL
	10 mM		0.4517 mL	2.2587 mL	4.5173 mL

Please refer to the solubility information to select the appropriate solvent.

### BIOLOGICAL ACTIVITY

#### Description

3-Aminopropyltriethoxysilane (APTES) acts as a strong glue to immobilize biomolecules such as antibodies and enzymes to silicon and silicon derivatives such as silicon nitride (Si<sub>3</sub>N<sub>4</sub>) on. 3-Aminopropyltriethoxysilane also acts as a spacer, providing biomolecules with more spatial freedom during immobilization for higher specific activity. 3-Aminopropyltriethoxysilane can form a more stable, sensitive, and highly biocompatible bioanalytical platform by immobilizing biomolecules onto some solid materials, electrode materials, nanomaterials, and nanocomposites<sup>[1][2]</sup>.

#### In Vitro

3-Aminopropyltriethoxysilane is unstable in aqueous solution (hydrolytically unstable), and its ethoxy group is easily hydrolyzed into ethanol and trienol group<sup>[2]</sup>.  
3-Aminopropyltriethoxysilane. At neutral pH, the half-lives of APTES are 56 h (10°C) and 8.4 h (24°C), respectively<sup>[2]</sup>. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

[1]. Saengdee P, et al. Optimization of 3-aminopropyltriethoxysilane functionalization on silicon nitride surface for biomolecule immobilization. Talanta. 2020;207:120305.

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

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