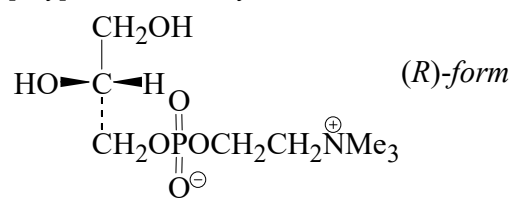




>>Entry Name: **Glycerylphosphorylcholine**

**Synonym(s):** 2-[[[(2,3-Dihydroxypropoxy)hydroxyphosphinyl]oxy]-*N,N,N*-trimethylethanaminium inner salt, 9Cl. Choline glycerophosphate



**CAS Registry Number:** 563-24-6

**Related CAS Registry Numbers(s):** 71861-27-3 73289-29-9

**Molecular Formula:** C<sub>8</sub>H<sub>20</sub>NO<sub>6</sub>P

**Molecular Weight:** 257.223

**Accurate Mass:** 257.102826

**Percentage Composition:** C 37.36%; H 7.84%; N 5.45%; O 37.32%; P 12.04%

**Biological Source:** Isol. from beef pancreas. Synth. from egg yolk lecithin

>>Variant: (*R*)-form

**Synonym(s):** **Choline alfoscerate**, INN. *sn*-Glycero-3-phosphocholine

**CAS Registry Number:** 28319-77-9

**Molecular Formula:** C<sub>8</sub>H<sub>20</sub>NO<sub>6</sub>P

**Molecular Weight:** 257.223

**Accurate Mass:** 257.102826

**Percentage Composition:** C 37.36%; H 7.84%; N 5.45%; O 37.32%; P 12.04%

**Biological Use/Importance:** Parasympathomimetic agent. Reported to be a precursor of acetylcholine. Used in the treatment of Alzheimer's disease and other dementias.

Involved in osmoregulation by renal medullary cells

**Physical Description:** Hygroscopic viscous liq. or solid

**Development Status:** Lunched 1990

**Optical Rotation:**  $[\alpha]_D^{23} -2.85$  (c, 2.2 in H<sub>2</sub>O)

>>Derivative: Compd. with CdCl<sub>2</sub>

**CAS Registry Number:** 64681-08-9

**Use/Importance:** Form of choline glycerophosphate easier to handle than free compd.

**Physical Description:** Needles (EtOH)

**Melting Point:** Mp 100-102°

**Optical Rotation:**  $[\alpha]_D^{24} -1.4$  (c, 5.5 in H<sub>2</sub>O)

**Other Data:** Sinters >97°

>>Variant: (*S*)-form

**Synonym(s):** *sn*-Glycero-1-phosphocholine

**CAS Registry Number:** 4217-84-9

**Molecular Formula:** C<sub>8</sub>H<sub>20</sub>NO<sub>6</sub>P

**Molecular Weight:** 257.223

**Accurate Mass:** 257.102826

**Percentage Composition:** C 37.36%; H 7.84%; N 5.45%; O 37.32%; P 12.04%

**Optical Rotation:**  $[\alpha]_{546}^{22} +3$  (c, 2.5 in H<sub>2</sub>O)

**Other Data:** Intermediate for synth of 'unnatural' 1-*sn*-phosphatidylcholines

>>Variant: (±)-form

**CAS Registry Number:** 34688-34-1

**Molecular Formula:** C<sub>8</sub>H<sub>20</sub>NO<sub>6</sub>P

**Molecular Weight:** 257.223

**Accurate Mass:** 257.102826

**Percentage Composition:** C 37.36%; H 7.84%; N 5.45%; O 37.32%; P 12.04%

**Melting Point:** Mp 152-153°

**Solubility:** Sol. H<sub>2</sub>O, EtOH, MeOH

**Other Data:** Described as visc. liq. (Baer) and v. hygroscopic powder (Mushika)

**References:**