

# Sphingomyelin

## Cell Culture Tested

**Product Code: TC279**

### Product Description:

Chemical formula:  $C_{41}H_{83}N_2O_6P$

CAS No.: 85187-10-6

Synonym: N-Acyl-4-sphingenyl-1-O-phosphorylcholine,  
N-Acyl-D-sphingosine-1-phosphocholine

Sphingomyelins constitute an important class of phospholipids in the membranes of eukaryotic cells. Sphingomyelin is a sphingolipid analogue of phosphatidylcholine. It consists of a ceramide unit with a phosphorylcholine moiety attached to position one.

In most tissues, sphingomyelin content ranges from 2 to 15%. Its concentration is prominently higher in the myelin sheath protecting the nerve axons and in blood cells.

Sphingomyelin acts as a secondary messenger in cell signaling pathways. Metabolites of sphingomyelin acts as mediators in signaling cascades involved in apoptosis, proliferation and stress responses. Sphingomyelin-induced apoptosis is used in biological research to study pathways and cellular mechanisms. Sphingomyelin and its metabolite, ceramide, are also used to induce cell proliferation under laboratory conditions.

TC279 is a cell culture tested sphingomyelin.

### Directions:

#### Preparation instructions:

The working concentration of sphingomyelin will depend on its application. Solutions can be prepared in ethanol, acetic acid or chloroform. Prepared solutions can be sterilized by filtering through a sterile membrane filter with a porosity of 0.22micron or less.

### Quality Control:

#### Appearance

White to beige powder

#### Solubility

33.3mg soluble in 1ml of Ethanol

#### Assay

NLT 98%

#### Cell Culture Test

Passes

### Storage and Shelf Life:

Store at  $-20^{\circ}C$  away from direct sunlight.

Shelf life of powder is 48 months.

Working solutions can be stored at  $-20^{\circ}C$  for up to 3 months.

Use before expiry date given on product label.

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### Disclaimer:

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