

PRODUCT DATA SHEET

Glucocerebrosides

Catalog No: 1057; 1057-25

Common Name: Glucosylceramide;
Ceramide *beta*-D-glucoside

Source: natural, human Gaucher spleen

Solubility: chloroform/methanol (2:1)

CAS No: 85305-87-9

Molecular Formula: C₄₈H₉₃NO₈

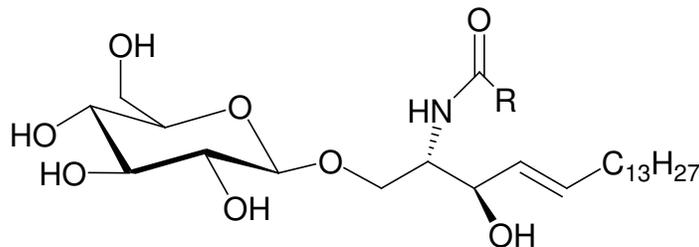
Molecular Weight: 812 (lignoceryl)

Storage: -20°C

Purity: TLC > 98%; identity confirmed by MS

TLC System: chloroform/methanol/DI water
(80:20:1 by vol.)

Appearance: solid



Application Notes:

Cerebrosides contain a glucose (glucocerebroside) or a galactose (galactocerebroside) attached to a ceramide having either hydroxy or non-hydroxy fatty acids. Glucocerebrosides occur in both neuronal and nonneuronal animal tissues where they accumulate in the outer leaflet of the plasma membrane. Glucocerebrosides are found in low quantities in most plants although there are some plants that are much richer in glucocerebroside.¹ Glucocerebrosides are very important in the synthesis of lactosylceramides and gangliosides as they act as the starting unit from which these sphingolipids are produced. Gaucher disease is characterized by an accumulation of abnormal quantities of glucocerebroside in the brain and spleen.² There has been evidence that glucocerebrosides may have a role in determining plasma membrane cryostability³ and they are a major constituent of skin lipids. Due to the role of gangliosides in cancer, glucocerebrosides are being investigated for anticancer properties.

Selected References:

1. Edgar B. Cahoon and Daniel V. Lynch "Analysis of Glucocerebrosides of Rye (*Secale cereale* L. cv Puma) Leaf and Plasma Membrane¹" *Plant Physiology* (1991) Vol. 95 pp. 58-68
2. Brady RO. "Gaucher's disease: past, present and future" *Baillieres Clin Haematol.* (1997) Vol. 10(4) pp. 621-634
3. Daniel V. Lynch, Martin Caffrey, Jacqueline L. Hogan,t and Peter L. Steponkus "Calorimetric and x-ray diffraction studies of rye glucocerebroside mesomorphism" *Journal of Biophysics* (1992) May, Vol. 61 pp. 1289-1300

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