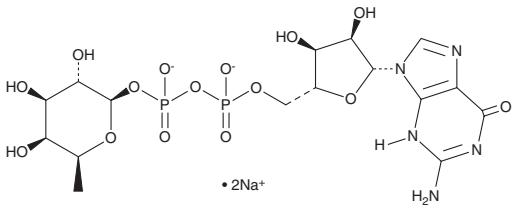
PRODUCT INFORMATION

Guanosine 5′-diphospho-β-L-fucose (sodium salt)

Item No. 46188

CAS Registry No.: 148296-47-3
Formal Name: guanosine 5′-(trihydrogen diphosphate), P′-(6-deoxy-β-L-galactopyranosyl) ester, disodium salt
Synonyms: GDP-fucose, GDP-β-L-fucose
MF: $C_{16}H_{23}N_5O_{15}P_2 \bullet 2Na$
FW: 633.3
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Guanosine 5′-diphospho-β-L-fucose (sodium salt) is supplied as a solid. Aqueous solutions of guanosine 5′-diphospho-β-L-fucose (sodium salt) can be prepared by directly dissolving the solid in aqueous buffers. Guanosine 5′-diphospho-β-L-fucose (sodium salt) is sparingly soluble (1-10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

Guanosine 5′-diphospho-β-L-fucose (GDP-fucose) is a nucleotide sugar and donor substrate for fucosyltransferases, a family of enzymes that catalyze the fucosylation of oligosaccharides and proteins.[1-3] Hippocampal levels of GDP-fucose are decreased in a mouse model of chronic social defeat stress-induced depression.[4]

References

1. Li, M., Liu, X.-W., Shao, J., *et al.* Characterization of a novel α1,2-fucosyltransferase of *Escherichia coli* O128:b12 and functional investigation of its common motif. *Biochemistry* **47(1)**, 378-387 (2008).
2. García-García, A., Ceballos-Laita, L., Serna, S., *et al.* Structural basis for substrate specificity and catalysis of α1,6-fucosyltransferase. *Nat. Commun.* **11(1)**, 973 (2020).
3. Lira-Navarrete, E. and Hurtado-Guerrero, R. A perspective on structural and mechanistic aspects of protein O-fucosylation. *Acta Crystallogr. F Struct. Biol. Commun.* **74(Pt 8)**, 443-450 (2018).
4. Zheng, M., Fukuda, T., Zhang, S., *et al.* L-fucose administration ameliorates chronic social defeat stress-induced depressive-like behaviors by restoring GDP-fucose biosynthetic activation and core fucosylation. *Front. Immunol.* **17:1909378**, (2026).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

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