LKT Laboratories, Inc.

2-Deoxy-D-glucose

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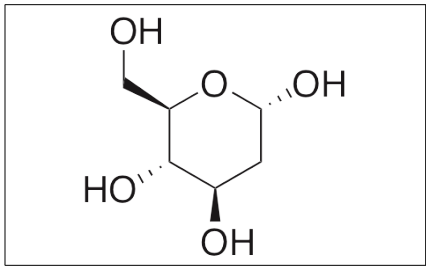
Product Information

Product ID D1859
CAS No. 154-17-6
Chemical Name

Synonym

Formula $C_6H_{12}O_5$
Formula Wt. 164.16
Melting Point 146-147°C
Purity ≥99%
Solubility



Bulk quanitites available upon request

Product ID	Size
D1859	1 g
D1859	5 g
D1859	25 g

Store Temp Ambient
Ship Temp Ambient

Description 2-deoxy-D-glucose inhibits glucose metabolism and is used as a biomarker of glucose metabolism, hypoxia, and angiogenesis in a variety of models and cell types, including neurotoxicity, cancer, and autoimmune disease; the 2-OH group of glucose is replaced by a hydrogen and therefore this compound can not be metabolized properly. 2-deoxy-D-glucose inhibits N-linked glycosylation and glycolysis, inhibiting surface expression of MICA/B and other NKG2D ligands on cells. This compound also exhibits anticancer and pro-oxidative activities, increasing oxidative stress and mimicking glucose deprivation, resulting in cell death of cancer cells.

References

Kaira K, Murakami H, Endo M, et al. Biological correlation of (18)F-FDG uptake on PET in pulmonary neuroendocrine tumors. Anticancer Res. 2013 Oct;33(10):4219-28. PMID: 24122985.

Andresen L, Skovbakke SL, Persson G, et al. 2-deoxy D-glucose prevents cell surface expression of NKG2D ligands through inhibition of N-linked glycosylation. J Immunol. 2012 Feb 15;188(4):1847-55. PMID: 22227571.

Shutt DC, O'Dorisio MS, Aykin-Burns N, et al. 2-deoxy-D-glucose induces oxidative stress and cell killing in human neuroblastoma cells. Cancer Biol Ther. 2010 Jun 1;9(11):853-61. PMID: 20364116.

Nowak M, Carrasquillo JA, Yarboro CH, et al. A pilot study of the use of 2-[18F]-fluoro-2-deoxy-D-glucose-positron emission tomography to assess the distribution of activated lymphocytes in patients with systemic lupus erythematosus. Arthritis Rheum. 2004 Apr;50(4):1233-8. PMID: 15077306.

Böhmer R, Rommel K. The behaviour of different markers of the mucosal extracellular space in rat small intestine. Acta Hepatogastroenterol (Stuttg). 1975 Dec;22(6):398-403. PMID: 1211066.