2-NBDG Glucose Uptake Assay Kit (Cell-Based)

Cat. No. Kit-1012 **Lot. No.** (See product label)

SPECIFICATION

Description	Glucose is a ubiquitous energy source in most organisms and plays a pivotal role in cellular metabolisms and homeostasis. Cancer cells exhibit increased glucose uptake to support their high proliferation rate. 2-NBDG (2-deoxy-2-[(7-nitro-2,1,3-benzoxadiazol-4-yl) amino]-D-glucose) is a fluorescent deoxyglucose analog that can be taken up by cells through glucose transporters. However, 2-NBDG cannot be fully utilized in glycolysis because of its modification and thus accumulates inside the cells. Fluorescence generated by this fluorescent glucose analog is proportional to glucose uptake by the cells and can be used to measure glucose uptake using fluorescent microscopy and flow cytometry. To validate the assay, the kit includes phloretin, a natural phenol that inhibits glucose uptake. This easy to use non-radioactive kit allows imaging and accurate measurement of glucose uptake in cultured cells in response to insulin, growth factors etc.
Applications	Measurement of glucose uptake in response to insulin, growth factors, cytokines, mitogens and nutrients, etc. Dual-staining of glucose transporters and glucose uptake Analysis of glucose metabolism and cell signaling in various cell types Screening of anti-diabetic compounds
Storage	-20°C
Shipping	Gel Pack
Size	50 assays

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

Kit Components	Analysis Buffer (50X); 2-NBDG Reagent (100X); Glucose Uptake Enhancer; Phloretin (100X)
Detection method	FACS (488 nm excitation laser) and fluorescent microscope (excitation range 420 nm-495 nm).
Features & Benefits	Easy-to-use; Non-radioactive; Image and accurately measure glucose uptake in cultured cells in response to insulin, growth factors etc.

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