



APPLICATION NOTE

AN004-01

Measurement of deoxyglucose toxicity in HK2 cells

Cells

HK2 cells, 2×10^4 cells/well

Dulbecco's MEM /Nut mix F12 (HAM) (Gibco/Life #31330-038)

ITS: insulin (5 $\mu\text{g/ml}$), transferrin (5 $\mu\text{g/ml}$) and selenium (5 ng/ml)
(# I 1884)

Hydrocortisone (36 ng/ml) (# H 0135)

EGF (10 ng/ml) (# E 1264)

Triiodothyronine (40 ng/ml) (# T 5516)

Antibiotic solution containing 100 units/ml penicillin, 100 g/ml streptomycin, 250 ng/ml amphotericin B

Cells are left overnight to attach to the plate

Exposure

100 μl / well, 3x stock solutions, serum-free

-in glucose-free DMEM (Hypoxia)

-in normal growth medium HgCl_2

c: control: glucose-free DMEM or normal medium

2-d: 2-deoxyglucose, 0.5, 1, 5 mM

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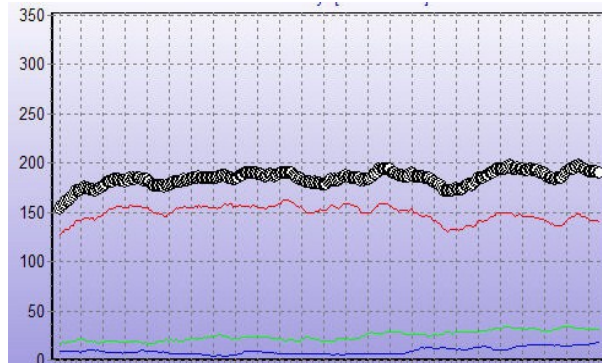
Results

Aim

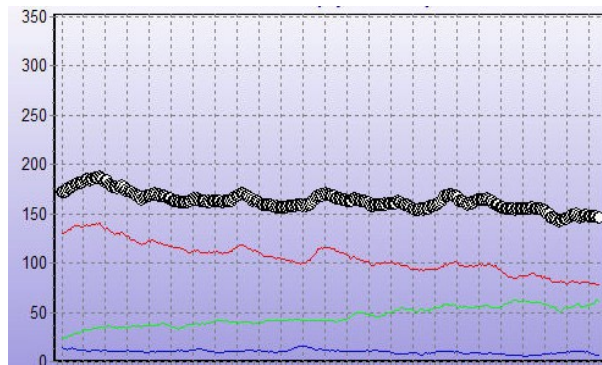
- to study the cell toxicity of deoxyglucose with renal tubular epithelial cell (HK2)
- to study the ability of Cell-IQ to analyze cell viability/ cell toxicity
- to compare the results obtained with Cell-IQ and conventional method (neutral red)

Cell-IQ® Data

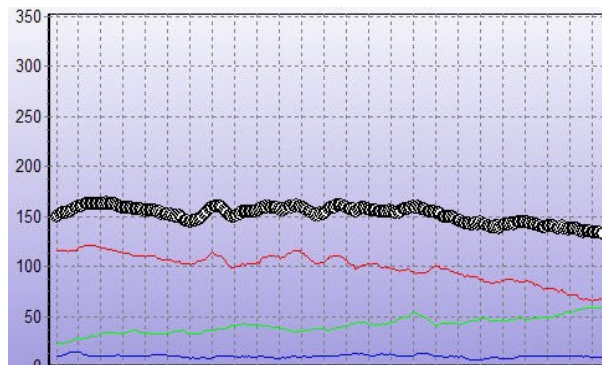
Control



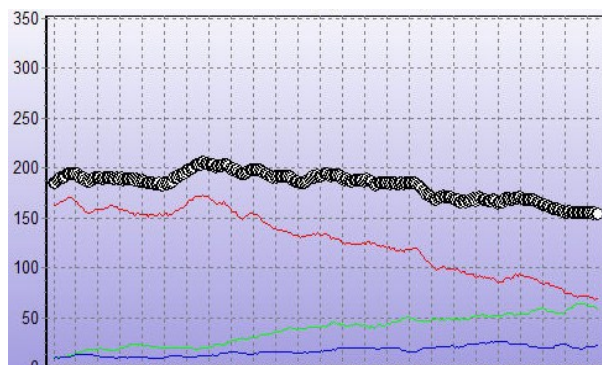
Deoxygl 0.5 mM



Deoxygl 1 mM



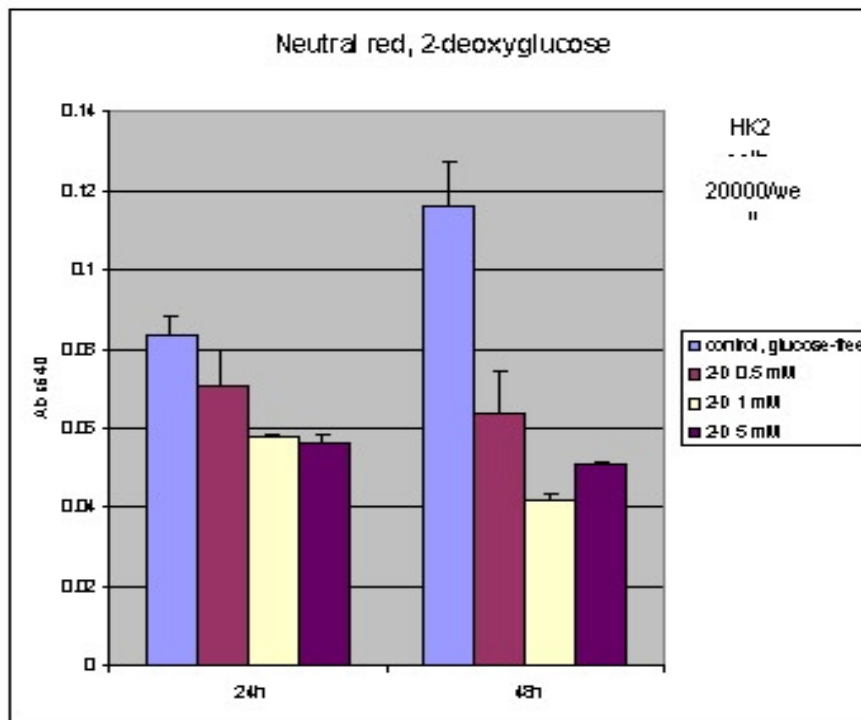
Deoxygl 5 mM



o=Total cell number red line = stable green line = dead blue line = dividing

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Conventional Method Data



Conclusion

Cell-IQ can measure cell toxicity of deoxyglucose similarly well as conventional cell viability test (neutral red test). Clearly the Cell-IQ records a full profile of the entire incubation allowing re-analysis for additional parameters.

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