



## APPLICATION NOTE

AN001-01

### To study renal tubular epithelial cell (HK2) toxicity of amitriptylin using the Cell IQ® comparing results to the traditional neutral red uptake method

#### Aim

- to study the renal tubular epithelial cell (HK2) toxicity of amitriptylin
- to study the ability of Cell-IQ to analyze cell viability

#### Cells

HK2 cells,  $2 \times 10^4$  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 to attach overnight

Exposure time 2 days

Endpoint measurements: 1 day and 2 days (9 microwell plates)

Exposure

100  $\mu\text{l}$ / well, 3x stock solutions  
in normal serum-free growth medium

c: control: normal medium

Ami: amitriptyline 5, 10, 25, 50, 100  $\mu\text{M}$

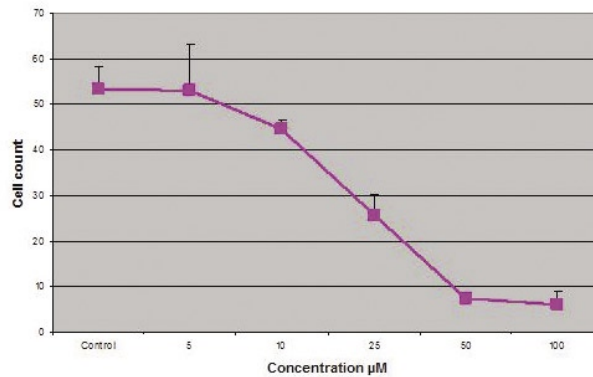
		1	2	3	4	5	6	7	8
no cells	A		c	Ami5	Ami10	Ami25	Ami50	Ami100	
$2 \times 10^4$ cells	B		c	Ami5	Ami10	Ami25	Ami50	Ami100	
$2 \times 10^4$ cells	C		c	Ami5	Ami10	Ami25	Ami50	Ami100	
$2 \times 10^4$ cells	D		c	Ami5	Ami10	Ami25	Ami50	Ami100	
$2 \times 10^4$ cells	E		c	Ami5	Ami10	Ami25	Ami50	Ami100	
$2 \times 10^4$ cells	F								

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## Results

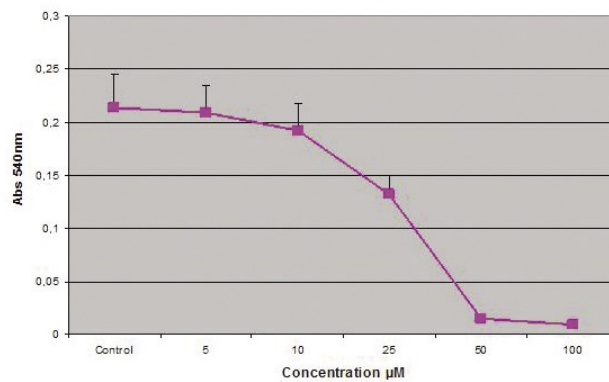
### Cell-IQ® Data

Counting with Cell IQ, living cells, HK2 cells  
48-h amitriptyline exposure

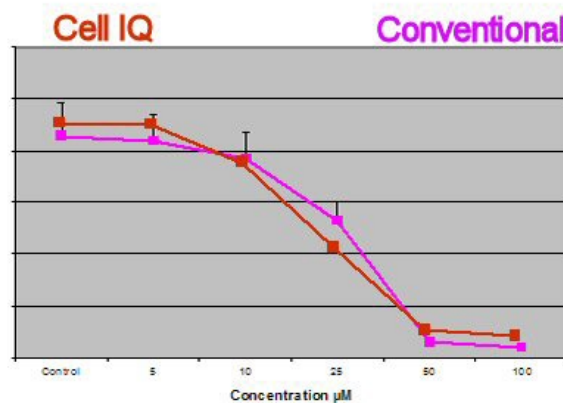


### Conventional Method Data

Staining of living cells with neutral red, HK2 cells  
48-h amitriptyline exposure



## Comparison



## Conclusion

Cell-IQ gave identical results compared to conventional methods for cell viability. In addition the entire incubation was recorded allowing easy re-analysis for additional parallel parameters.