

IN CYTOTOX



XTT TETRAZOLIUM HYDROXIDE

MTT DIPHENYLTETRAZOLIUM BROMIDE

APPLICATIONS

Colorimetric assay for the quantification of the mitochondrial metabolism and respiratory chain activity of cells in response to pharmaceutical, chemical and environmental compounds, and nutrients.

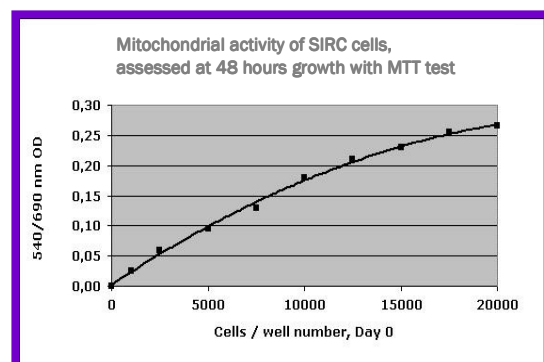
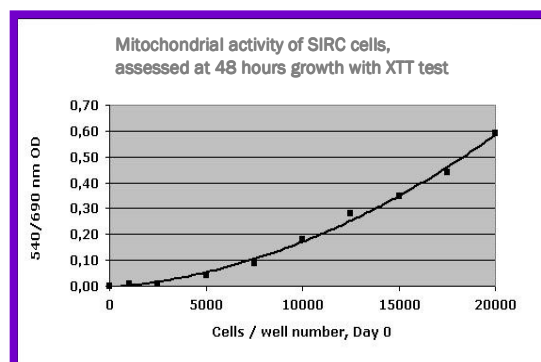
PRINCIPLE

The tetrazolium salts XTT and MTT can be used to measure the metabolic activity of viable cells. Tetrazolium salts are reduced to formazan by mitochondrial succinate dehydrogenase, an enzyme which is only active in cells with an intact metabolism and respiratory chain. The formazan is quantified photometrically and correlates with the number of viable cells.

Unlike MTT, the XTT formazan product is water soluble. The XTT assay needs therefore no solubilization step which allows to obtain results typically after about 3 hr (depending on incubation length). MTT requires an additional overnight incubation.

BIOLOGICAL PARAMETERS EVALUATION

- IC₅₀ (Inhibitory Concentration 50%)
- Metabolic cytotoxicity
- Respiratory chain activity



TECHNICAL SPECIFICATIONS

- Absorbance:**
- MTT: 540 nm
 - XTT: 480 (optimum) or 450 nm
- Approximate assay time:**
- 3 hrs 10 min (depending on the cell line) + overnight solubilization step (MTT only)
- Available kit configurations:**
- Reagents only
 - Reagents and 96-well microplates, sterile reagent reservoirs
- MTT Kit content:**
- Substrate solution
 - Solubilization solution
 - Instruction manual
- XTT Kit content:**
- Substrate solution
 - Buffer solution
 - Instruction manual

MTT KIT SIZES AND REFERENCE NUMBERS

REFERENCE NO.	NUMBER OF TESTS
AKMT96.300	300
AKMT96.1200	1200

XTT KIT SIZES AND REFERENCE NUMBERS

REFERENCE NO.	NUMBER OF TESTS
AKXT96.300	300
AKXT96.1200	1200

Kits with plasticware (microplates and reservoirs) are also available.
Individual reagents and other kit sizes available upon request.

Version 1.5 01/2007

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Manufactured By: Xenometrix AG