Toutes les photos (3)

Documents

FDS

COO/COA

11465015001 Roche

Cell Proliferation Kit II (XTT)

liquid, pkg of 1 kit, suitable for cell analysis, suitable for tissue culture

Synonyme(s):
xtt

Référence	Conditionnement	Disponibilité		Prix	Quantité
11465015001	2500 TESTS	Only 6 left in stock (more on the way)	Détails...	585,00 €	− +

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PRODUITS RECOMMANDÉS

Roche

11465007001

Cell Proliferation Kit I (MTT)

Roche

CELLPRO-RO

Cell Proliferation Reagent WST-1

suitable for protein quantification, suitable for cell analysis, detection, solution

Consulter le prix et la disponibilité

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PROPRIÉTÉS

Forme	liquid
Niveau de qualité	100
Utilisation	sufficient for ≤2,500 tests
Conditionnement	pkg of 1 kit
manufacturer/tradename	Roche
Conditions de stockage	protect from light
technique(s)	tissue culture: suitable
λ_{max}	450-500 nm
application(s)	cell analysis detection
detection method	colorimetric
Expédié(e)(s) dans	dry ice
Temp. de stockage	−20°C

Catégories apparentées

Cell Health Analysis

Roche® Life Science Products

DESCRIPTION

Description générale

The Cell Proliferation Kit II (XTT) is a colorimetric assay for the nonradioactive quantification of cellular proliferation, viability, and cytotoxicity. Sample material is either adherent or suspension cells cultured in 96-well microplates.

Colorimetric assays analyze the number of viable cells by the cleavage of tetrazolium salts added to the culture medium. This technique requires neither washing nor harvesting of cells, and the complete assay, from microculture to data analysis by an ELISA reader, is performed in the same microplate.
More recently, the tetrazolium salt XTT was described. In contrast to MTT, the cleavage product of XTT is soluble in water; therefore, a solubilization step is not required. The tetrazolium salt XTT is cleaved to formazan by a complex cellular mechanism. This bioreduction occurs in viable cells only, and is related to NAD(P)H production through glycolysis. Therefore, the amount of formazan dye formed directly correlates to the number of metabolically active cells in the culture.

Application

The Cell Proliferation Kit II (XTT) is used for the nonradioactive, spectrophotometric quantification of cell proliferation and viability in cell populations using the 96-well-plate format. It can be used for:

- Measurement of cell proliferation in response to growth factors, cytokines, mitogens, and nutrients.
- Analysis of cytotoxic and cytostatic compounds, such as anti-cancer drugs and other pharmaceutical compounds.
- Assessment of growth-inhibitory antibodies and physiological mediators that inhibit cell growth.

- Testing of biocompatibility of various scaffolds, employed in bone tissue engineering, for bone cell growth.
- cell viability assay.

Caractéristiques et avantages

- Safe and easy: Eliminate radioactive isotopes, washing steps, and additional reagents.
- Accurate: The absorbance obtained strongly correlates to the cell number.
- Sensitive: Detect low cell numbers.
- Fast: Process a large number of samples using a multi-well ELISA reader.

Conditionnement

1 kit containing 2 components.

Principe

The assay is based on the cleavage of the tetrazolium salt XTT in the presence of an electron-coupling reagent, producing a soluble formazan salt. This conversion only occurs in viable cells. Cells grown in a 96-well tissue culture plate are incubated with the XTT labeling mixture for 2 - 20 hours. After this incubation period, the formazan dye formed is quantitated using a scanning multi-well spectrophotometer (ELISA reader). The measured absorbance directly correlates to the number of viable cells.
Cell proliferation and viability assays are of particular importance for routine applications in cell biology. Tetrazolium salts (e.g., MTT, XTT, WST-1) are particularly useful for this type of analysis. Tetrazolium salts are cleaved to formazan by the succinate-tetrazolium reductase system (EC 1.3.99.1) which belongs to the respiratory chain of the mitochondria, and is only active in metabolically intact cells.

Notes préparatoires

Working solution: Preparation of solutions
Thaw XTT labeling reagent and electron-coupling reagent, respectively in a water bath at 37 °C. Mix each vial thoroughly to obtain a clear solution.
XTT labeling mixture

To perform a cell proliferation assay (XTT) with one microplate (96 wells) mix 5 ml XTT labeling reagent with 0.1 ml electron coupling reagent.

Note: To obtain reliable results thaw and mix XTT labeling reagent and electron coupling reagent immediately before use.

Working instruction

Cells are grown in microplates (tissue culture grade, 96 wells, flat bottom) in a final volume of 100 µl culture medium per well, according to the media needs of the cells in a humidified atmosphere (*e.g.,* 37 °C, 6.5% CO_2).

The incubation period of the cell cultures depends on the particular experimental approach and on the cell line, used for the assay. For most experimental setups, the incubation of cells for 24 to 96 hours is appropriate.

After the incubation period, add to each well 50 µl of the XTT labeling mixture, prepared as described above (final XTT concentration 0.3 mg/ml).

Incubate the microplate for 4 to 24 hours in a humidified atmosphere (*e.g.,* 37 °C, 6.5% CO_2).

Note: The incubation time varies with the individual experimental setup (*e.g.,* cell type and cell concentration, used). Therefore, we recommend to measure the absorption as described at different time points after addition of XTT labeling mixture (*e.g.,* 4, 6, 8, 12, and 18 hours) using one and the same microplate to determine the optimal incubation period for the particular experimental setup.

Storage conditions (working solution): Thaw reagents immediately before use. It is recommended to prepare appropriate aliquots [5 ml XTT labeling reagent and 0.1 ml electron coupling reagent are required for the performance of the assay with one microplate (96 wells)]

Note: Avoid repeated thawing and freezing.

Autres remarques

For life science research only. Not for use in diagnostic procedures.

Composants de kit seuls

Réf. du	Description

produit

XTT Labeling Reagent

Electron-coupling Reagent

PRODUITS APPARENTÉS

Produit Apparenté

96992

Cell Counting Kit - 8, for quantitation of viable cell number in proliferation and cytotoxicity assays

View Pricing

INFORMATIONS SUR LA SÉCURITÉ

Code de la classe de stockage
12 - Non Combustible Liquids

WGK
nwg

Flash Point(F)
does not flash

Point d'éclair C
does not flash

DOCUMENTATION

Certificat d'analyse

Saisir un numéro de lot pour rechercher un certificat d'analyse (COA).

Numéro de lot

e.g. 023J5431

Comment saisir un numéro de lot (COA)

Rechercher

Certificat d'origine

Saisir un numéro de lot pour rechercher un certificat d'origine (COO).

Numéro de lot

e.g. 023J5431

Comment saisir un numéro de lot (COO)

Rechercher

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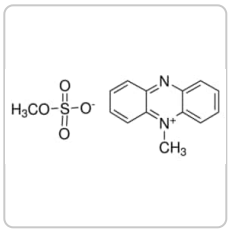

Sigma-Aldrich

P9625

Phenazine methosulfate

≥90% (UV)

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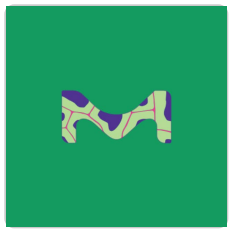

Supelco

04511

Live/Dead Cell Double Staining Kit

suitable for fluorescence

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ARTICLES REVUS PAR DES PAIRS

Senescent growth arrest in mesenchymal stem cells is bypassed by Wip1-mediated downregulation of intrinsic stress signaling pathways.

Lee J S, et al.
Stem Cells, 27(8), 1963-1975 (2009)

High-Temperature Requirement A1 (Htra1) - A Novel Regulator of Canonical Wnt Signaling.

Oriane G, et al.
Scientific Reports, 7(1), 17995-17995 (2017)

A combination of photodynamic therapy and chemotherapy displays a differential cytotoxic effect on human metastatic melanoma cells.

Nsole Biteghe F A and Davids L M
Journal of Photochemistry and Photobiology. B, Biology, 166, 18-27 (2017)

Targeting of receptor for advanced glycation end products suppresses cyst growth in polycystic kidney disease.

Eun Young Park et al.
The Journal of biological chemistry, 289(13), 9254-9262 (2014-02-12)

Autosomal dominant polycystic kidney disease (ADPKD) is the most common inherited renal disorder. Although a myriad of research groups have attempted to identify a new therapeutic target for ADPKD, no drug has worked well in clinical trials. Our research group

SNS01-T modulation of eIF5A inhibits B-cell cancer progression and synergizes with bortezomib and lenalidomide.

Sarah M Francis et al.
Molecular therapy : the journal of the American Society of Gene Therapy, 22(9), 1643-1652 (2014-02-27)

The high rates of recurrence and low median survival in many B-cell cancers highlight a need for new targeted therapeutic modalities. In dividing cells, eukaryotic translation initiation factor 5A (eIF5A) is hypusinated and involved in regulation of protein synthesis and

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PROTOCOLES ET ARTICLES SCIENTIFIQUES

Articles

Cell Viability and Proliferation Assays

Cell based assays for cell proliferation (BrdU, MTT, WST1), cell viability and cytotoxicity experiments for applications in cancer, neuroscience and stem cell research.

Protocoles

Cell Viability and Proliferation XTT Assay Protocol Guide

Perform colorimetric assays for nonradioactive quantification of cellular proliferation, viability, and cytotoxicity for adherent or suspension cells cultured in 96-well microplates.

PRODUITS CONSULTÉS RÉCEMMENT

Roche

11465007001

Cell Proliferation Kit I (MTT)

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Roche

PRON-RO

Pronase

from *Streptomyces griseus*

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Notre équipe de scientifiques dispose d'une expérience dans tous les secteurs de la recherche, notamment en sciences de la vie, science des matériaux, synthèse chimique, chromatographie, analyse et dans de nombreux autres domaines..

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