abcam

Product datasheet

Adipogenesis Assay Kit (Cell-Based) ab133102

6 References 画像数 2

医薬用外劇物

製品の概要

製品名	Adipogenesis Assay Kit (Cell-Based)
検出方法	Colorimetric
サンプルの種類	Adherent cells
アッセイタイプ	Cell-based
種交差性	**交差種:** Mammals, Other species
製品の概要	Adipogenesis Assay Kit (ab133102) provides the reagents required for studying the induction and inhibition of adipogenesis in the established 3T3-L1 model using the adipogenesis induction procedure. This kit can also be used to screen drug candidates involved in adipogenesis. The classic Oil Red O staining for lipid droplets is used in this kit as an indicator of the degree of adipogenesis and can be quantified with a plate reader after the dye is conveniently extracted from the lipid droplet.
特記事項	Obesity is a risk factor in many of the major chronic diseases such as diabetes mellitus, and cancer. The ability to regulate the number of fat cells and/or the size of fat cells is a key in the development and physiology of obesity and also in the origin of chronic disease. Mammals have both brown adipose tissue (BAT), which utilizes lipids to generate heat in a process known as thermogenesis, and white adipose tissue (WAT) which stores excess energy as triglycerides in lipid droplets. Adipocytes are derived from multipotent mesenchymal precursor cells commit to preadipocytes and then either remain dormant or proceed to become differentiated adipocytes. 3T3-L1 cells are a well-characterized cell line to study the differentiation of adipocytes, and other mechanisms such as insulin-induced glucose uptake and mechanisms of obesity development. This model system has greatly advanced the understanding of the molecular basis and signaling pathways of **adipogenesis**. During terminal differentiation, the fibroblast-like preadipocytes undergo a series of morphological and biochemical changes to eventually accumulate lipid droplets. This *in vitro* differentitated adipocytes share similar morphology with adipocytes *in vivo*.
試験プラットフォーム	Microplate reader

製品の特性

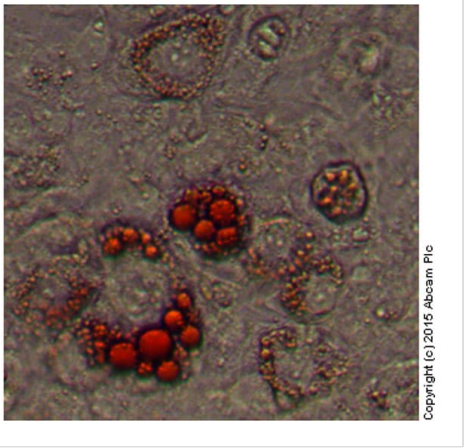
保存方法	Please refer to protocols.

内容	1 kit
Adipogenesis Assay Dexamethasone Solution	1 x 500µl
Adipogenesis Assay Insulin Solution (1,000X)	1 x 1.5ml
Cell Based Assay IBMX Solution (1,000X)	1 x 500µl
Fixative (10X)	1 x 10ml
Lipid Droplets Assay Dye Extraction Solution	1 x 30ml
Lipid Droplets Assay Oil Red O Solution	1 x 25ml
Lipid Droplets Assay Wash Solution	6 x 30ml

関連性

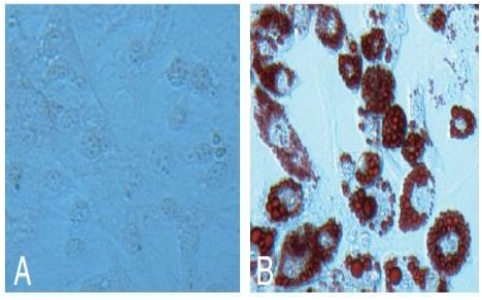
Adipogenesis is the process of differentiation of different cell types into adipocytes, the primary fat storage cell type. The accumulation of adipocytes is the basis for obesity, a significant risk factor in many diseases, including diabetes, atherosclerosis, cancer and cardiovascular disease, etc. Adipocytes accumulate triglycerides, in the form of lipid droplets which can be measured.

画像



Adipogenesis Assay Kit (Cell-Based) (ab133102)

Lipid droplet accumulation in the differentiated 3T3-L1 cells visualized by Oil Red O Solution staining.



Functional Studies - Adipogenesis Assay Kit (Cell-Based) (ab133102)

Upon induction, 3T3-L1 cells differentiate into adipocytes-like cells and they are ready to be used for adipogenesis experiments. Panel A: Non-differentiated 3T3-L1 cells were not stained by Oil Red O Solution.

Panel B: more than 80% of preadipocytes were differentiated four days after weaning the cells from induction medium to insulin medium. Lipid droplet accumulation in the differentiated cells can be visualized by Oil Red O Solution staining.

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