

New Product Highlights

Assay Kits for Cell Signaling

Senescent Cells Staining Kit

Prod. No. **CS0030**

Cellular senescence is a progression of events whereby cells move from an actively dividing to a non-dividing stage. In conjunction with the loss of division potential, changes occur in the morphology, shape and physical appearance of the cells, and in their pattern of gene expression.

The Senescent Cells Staining kit contains all the reagents required for identifying senescent cells using a rapid staining procedure. The assay is based on the histochemical staining of β -galactosidase activity at pH 6. Under these conditions, β -galactosidase activity is easily detectable in senescent cells, but undetectable in quiescent, immortal or tumor cells.

Advantages

- The kit has been tested on natural senescent foreskin fibroblasts as well as on p53-induced transfected cells.
- The X-gal staining reagent is supplied in solution.

Sufficient for 100 tests of 3.5 cm tissue culture plates.

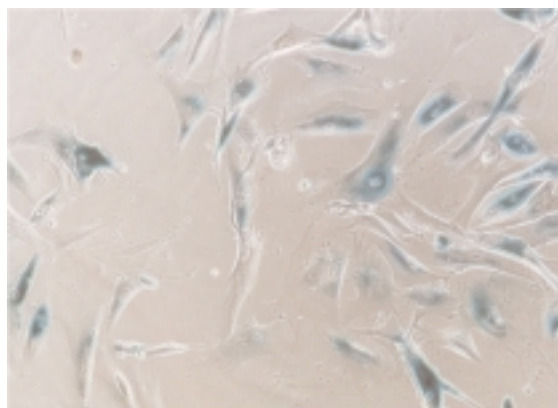
Components

Fixation buffer 10X, 15 mL
 Reagent B, 1.5 mL
 Reagent C, 1.5 mL
 X-gal solution, 4 mL
 Staining solution 10X, 15 mL
 Dulbecco's phosphate buffered saline (PBS) 10X, 60 mL

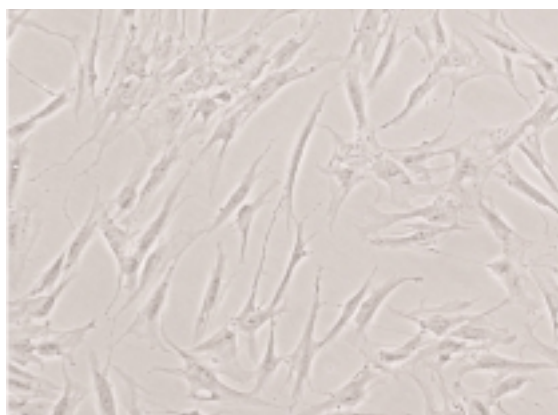
Reference

Dimri, G.P, et al., *Proc. Natl. Acad. Sci. USA*, **92**, 9363-9367 (1995).

Manufactured under license to US Patent Nos. 5,491,069 and 5,795,728.



A. Human Foreskin Fibroblasts passage 28 (senescent cells)



B. Human Foreskin Fibroblasts passage 5 (control)

β -Secretase (BACE1) Activity Kit (FRET)

Prod. No. **CS0010**

BACE1 (β -Secretase or β -site APP-cleaving enzyme) is a trans-membrane protease responsible for the β -site cleavage of the amyloid precursor protein (APP) to produce amyloid beta peptide ($A\beta$). The accumulation of $A\beta$ in the brain is believed to be a primary cause for the progression of Alzheimer's disease. Therefore, BACE1 has become a major target for drug discovery research.

The BACE1 Activity Assay kit is designed for BACE1 inhibitor screening. It provides all the reagents required for the efficient detection of BACE1 activity, including BACE1 enzyme. The assay is based on fluorescence resonance energy transfer (FRET) in which enhancement of the fluorescence signal is observed following substrate cleavage by BACE1.

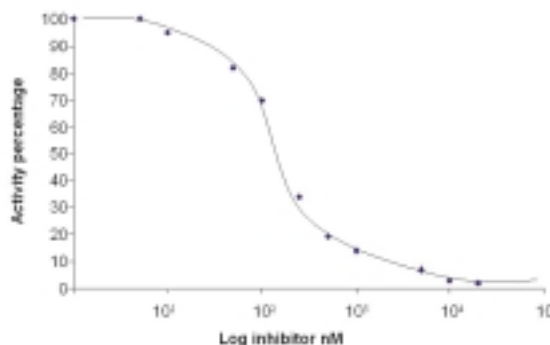
Sufficient for 250 inhibition reactions of 100 μ L in 96-well plates.

Components

Fluorescent assay buffer, 50 mL
 Stop solution, 15 mL
 BACE1 Substrate (MOCA-SEV-NL-DAEFR-DNP-RR), 0.5 mg
 Assay Standard, 1 vial
 BACE1 (β -secretase, 300 units), 100 μ L

References

1. Citron M., *J. Neurosci. Res.*, **70**, 373-379 (2002).
2. Hong, L., et al., *Biochem. Soc. Trans.*, **30**, 530-534 (2002).



Inhibition of BACE1 activity by a statine-derived inhibitor (Prod. No. **A 1847**). BACE1 was incubated with various concentrations of the inhibitor for 2 hours at 37°C. BACE1 activity was determined using the BACE1 Activity Assay Kit (Prod. No. **CS0010**).

For more information on Assay Kits for Cell Signaling, fill out the Business Reply Card to receive our newest brochure.