

# Cellular Acetylation / Deacetylase Assay Kits

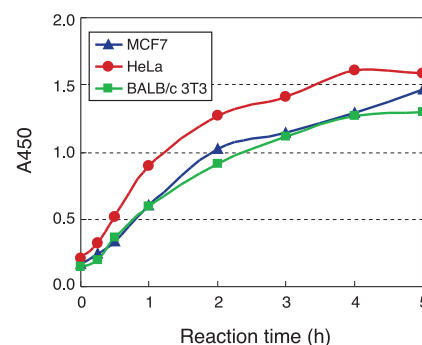


## Histone Acetylation Assay Kit

CycLex Histone Acetylation Kit is a cell-based ELISA formatted for conventional chromometric detection of relative levels of acetylated histones in microplate cells cultures. Adherent cells are cultured in conventional 96-well microplates, treated with agents that induce histone acetylation, such as Trichostatin A, a specific HDAC inhibitor, and are then fixed and permeabilized. Several types of histones, including histone H3 and H4, which are acetylated at several lysine residues are detected by anti-acetylated histone/p53-K382 monoclonal antibody.

This measuring principle and kit are covered under CycLex's patents.  
U.S. Patent No. 6,884,597

Code.	Product name	Size
CY-1140	CycLex® Cellular Histone Acetylation Assay Kit	96 assays×2
CY-M1029	Anti-Acetylated Histone/p53-Lys382	100 µg



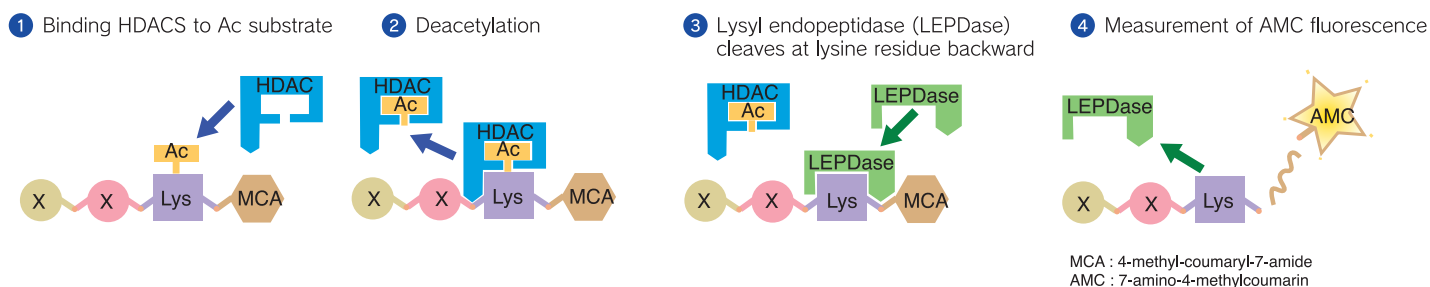
Typical result of time course experiment using MCF7, HeLa and BALB/c 3T3 cell lines treated with 0.25 µM Trichostatin A

## HDAC Deacetylase Fluorometric Assay Kit

CycLex HDACs Deacetylase Fluorometric Assay Kit measures the activity of HDAC by the basic principle of changing an HDAC reaction into the activity of the protease. Since it is very simple to measure common protease activity and it can be performed at a low price, the measurement of HDAC activity in most laboratories is possible if they are equipped with a fluorescent reader for microtiter plates. Considering that the use of fully automatic apparatus to measure fluorescence intensity has become widespread, HDAC activity measurement, which could not be made by the conventional method, is now possible with the CycLex HDACs Deacetylase Fluorometric Assay Kit using the same equipment. This new method of measurement should dramatically raise the efficiency of inhibitor screening and biochemical analysis of these enzymes.

This measuring principle and kit are covered under CycLex's patents.  
U.S. Patent No. 7,033,778 and No. 7256013  
European Patent No. 1243658  
Japanese Patent No. 4267043  
Canadian Patent No. 2392711

### Principle of the Assay



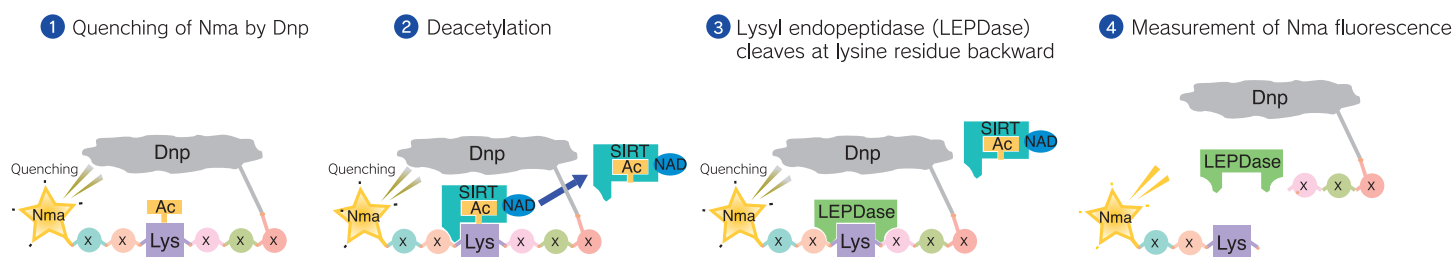
Code.	Product name	Size
CY-1150V2	CycLex® HDACs Deacetylase Fluorometric Assay Kit Ver.2	100 assays
CY-1158V2	CycLex® HDAC8 Deacetylase Fluorometric Assay Kit Ver.2	100 assays
CY-P1011	Anti-HDAC1	100 µg
CY-P1012	Anti-HDAC2	100 µg

## SIRT Deacetylase Fluorometric Assay Kit

Sir2 is a conserved protein and was recently shown to regulate lifespan extension both in budding yeast and nematode. In 2000, it was reported that the yeast Sir2 protein is a NAD<sup>+</sup>-dependent histone deacetylase that plays a critical role in transcriptional silencing, genome stability and longevity. In mammals, the homologs of Sir2 have been named sirtuins (SIRT), with seven members in a family termed SIRT1 through SIRT7. They share a conserved central deacetylase domain but have different N and C termini and display distinct subcellular localization, suggesting different biological functions.

SIRT1 was shown to regulate the activity of the p53 tumor suppressor and inhibits apoptosis. These results have significant implications regarding an important role for SIRT1 in modulating the sensitivity of cells in p53-dependent apoptotic response and the possible effect in cancer therapy. Since the function of p53 is made to strengthen powerfully by using together with DNA damaging reagent, it is expected that inhibitor of SIRT1 becomes an effective anticancer drug.

### Principle of the Assay



### References

- (1) Kaeberlein, M. *et al.* J. Biol. Chem., 280:17038–17045, 2005
- (2) Borra, M. T. *et al.* J. Biol. Chem., 280: 17187–17195, 2005
- (3) Pacholec, M. *et al.* J. Biol. Chem., 285: 8340–8351, 2010
- (4) Ledford H. News "Ageing: Much ado about ageing." Nature 464: 480–481, 2010

Code.	Product name	Size
CY-1151V2	CycLex <sup>®</sup> SIRT1/Sir2 Deacetylase Fluorometric Assay Kit Ver.2	100 assays
CY-1152V2	CycLex <sup>®</sup> SIRT2 Deacetylase Fluorometric Assay Kit Ver.2	100 assays
CY-1153V2	CycLex <sup>®</sup> SIRT3 Deacetylase Fluorometric Assay Kit Ver.2	100 assays
CY-1156V2	CycLex <sup>®</sup> SIRT6 Deacetylase Fluorometric Assay Kit Ver.2	100 assays
CY-E1151	NAD <sup>+</sup> -Dependent Deacetylase SIRT1	100 µg
CY-E1152	NAD <sup>+</sup> -Dependent Deacetylase SIRT2	100 µg
CY-E1153	NAD <sup>+</sup> -Dependent Deacetylase SIRT3	100 µg
CY-E1156	NAD <sup>+</sup> -Dependent Deacetylase SIRT6	100 µg
CY-P1016	Anti-SIRT1	100 µg