

# Certificate of Analysis

**Product Name:** ADP/ATP Ratio Assay Kit

**Catalog No.:** Z5030042

**Shipping Condition:** Dry ice

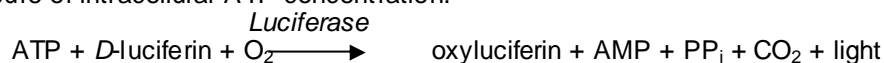
**Storage Condition:** Store all reagents at -20°C.

**Shelf Life:** 6 months from the date of receipt under proper storage conditions

## Description

Changes in the ADP/ATP ratio have been used to differentiate modes of cell death and viability. Increased levels of ATP and decreased levels of ADP signify proliferating cells. Conversely, decreased levels of ATP and increased levels of ADP represent apoptotic or necrotic cells where the decrease in ATP and increase in ADP is much more pronounced in necrosis versus apoptosis.

BioChain' ADP/ATP Ratio Assay Kit provides a rapid method to measure ADP and ATP levels for the screening of apoptosis, necrosis and cell proliferation in mammalian cells. The assay involves two steps. In the first step, the working reagent lyses cells to release ATP and ADP. In the presence of *Luciferase*, ATP immediately reacts with the Substrate *D*-Luciferin to produce light. The light intensity is a direct measure of intracellular ATP concentration.



In the second step, the ADP is converted to ATP through an enzyme reaction. This newly formed ATP then reacts with the *D*-luciferin as in the first step. Due to a special formulation of the reagent system which greatly stabilizes the light signal generated by the luciferase reaction, the luminescence from the initial ATP measurement remains stable throughout this assay. Therefore, the second light intensity measured represents the total ADP and ATP concentration in the sample.

This non-radioactive, homogeneous cell-based assay is performed in microplates. The reagent is compatible with all culture media and with all liquid handling systems for high-throughput screening applications in 96-well and 384-well plates.

## Components

1. One Kit
2. User Manual
3. Certificate of Analysis
4. MSDS

**FOR IN VITRO RESEARCH USE ONLY**

**APPROVED BY:** \_\_\_\_\_

