

Bioluminescence Cytotoxicity Assay Kit

(Catalog #K312-500; 500 assays; Store at -20°C)

FOR RESEARCH USE ONLY! Not to be used in human.

RELATED PRODUCTS:

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- Annexin V Kits & Bulk Reagents
- Caspase Assay Kits & Reagents
- Mitochondrial Apoptosis Kits & Reagents
- Nuclear Apoptosis Kits & Reagents
- Apoptosis Inducers and Set
- Apoptosis siRNA Vectors

Cell Fractionation System

- Mitochondria/Cytosol Fractionation Kit
- Nuclear/Cytosol Fractionation Kit
- Membrane Protein Extraction Kit
- Cytosol/Particulate Rapid Separation Kit
- Mammalian Cell Extraction Kit
- FractionPREP Fractionation System

Cell Proliferation & Senescence

- Quick Cell Proliferation Assay Kit
- Senescence Detection Kit
- High Throughput Apoptosis/Cell Viability Assay Kits
- LDH-Cytotoxicity Assay Kit
- Bioluminescence Cytotoxicity Assay Kit
- Live/Dead Cell Staining Kit

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- HDAC Fluorometric & Colorimetric Assays & Drug Discovery Kits
- HAT Colorimetric Assay Kit & Reagents
- DNA Damage Quantification Kit
- Glutathione & Nitric Oxide Fluorometric & Colorimetric Assay Kits

Signal Transduction

- cAMP & cGMP Assay Kits
- Akt & JNK Activity Assay Kits
- Beta-Secretase Activity Assay Kit

Adipocyte & Lipid Transfer

- Recombinant Adiponectin, Survivin, & Leptin
- CETP Activity Assay & Drug Discovery Kits
- PLTP Activity Assay & Drug Discovery Kits
- Total Cholesterol Quantification Kit

Molecular Biology & Reporter Assays

- siRNA Vectors
- Cloning Insert Quick Screening Kit
- Mitochondrial & Genomic DNA Isolation Kits
- 5 Minutes DNA Ligation Kit
- 20 Minutes Gel Staining/Destaining Kit
- β -Galactosidase Staining Kit & Luciferase Reporter Assay Kit

Growth Factors and Cytokines

Monoclonal and Polyclonal Antibodies

I. Introduction:

Cell death or cytotoxicity is classically evaluated by the quantification of plasma membrane damage. Adenylate kinase (AK) is a ubiquitous protein present in all eukaryotic and prokaryotic cells and rapidly release into culture medium upon damage of the plasma membrane. The **Bioluminescence Cytotoxicity Assay Kit** is based on the measurement of AK in a simple one-step procedure involving two chemical reactions. The first reaction is the conversion of ADP to ATP by adenylate kinase that was released from the damaged cells. The second reaction utilizes luciferase to catalyze the formation of light from ATP and luciferin, and the light can be measured using a luminometer or beta counter. The assay is highly sensitive and can be fully automatic for high throughput.

II. Kit Contents:

Components	500 assays	Part No.	Color Code
AK Detection Reagent (Lyophilized)	5 vials	K312-500-1	Green
AK Assay Buffer	50 ml	K312-500-2	NM

III. Preparation of Reagents and General Considerations:

- Reconstitute each vial of the AK Detection Reagent with 10 ml AK Assay Buffer. Mix gently. Allow the mixture to equilibrate for 15 min at room temperature before use. Use the reconstituted reagent within 6 hours, or 24 hours if stored at 4°C. Unused reagent can be stored at -20°C for up to 2 months. Once thawed, the reagent must not be refrozen. Ensure that all reagents are at room temperature before use. The optimal temperature is 22°C.

IV. Assay Protocol:

1. Treat cells by desired method. Concurrently incubate a control culture without treatment.
2. Transfer 100 μ l of the culture medium into a 96 well plate.
3. Add 100 μ l of the reconstituted AK reagent to each well. Incubate for 5 minutes.

Note: If using 384 well plate, we recommend adding 20 μ l of the culture medium and 30 μ l of the AK Detection Reagent.

4. Read in a Microplate Luminometer.

Note: Samples should be read within 30 minutes following the addition of the AK Detection Reagent. The reaction time should be kept consistent for all samples.

V. Microplate Luminometers with Injectors:

If using a microplate luminometer equipped with reagent dispensers, the Dispenser 1 should be primed with the AK Detection Reagent and set to dispense 100 μ l (for 96-well plate) or 30 μ l (for 384-well plate). It is recommended a delay time of at least 5 minutes prior to measurement (but no more than 30 minutes) be incorporated after the injection of the AK Detection Reagent. An 1 second integrated reading is recommended.