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Camptothecin (10 mM in DMSO)

Cat #: KTA0009 Size: 200 μL

	Camptothecin (10 mM in DMSO)		
REF	**Cat #:** KTA0009	LOT	**Lot #:** Refer to product label
	Applications: cells		
	Note: Stored at -20℃ for 12 months		

Assay Principle

Camptothecin (CPT), CAS number: 7689-03-4, a cytotoxic quinoline alkaloid isolated from the bark and trunk of Camptotheca acuminata, is an effective inhibitor of Topoisomerase I (IC50=0.68 μM). Irreversibly bind to the DNA-Topo I cleavage complex, inducing DNA strand breaks. Camptothecin exhibits strong anti-tumor activity in various experimental tumor models and simultaneously inhibits DNA and RNA synthesis in mammalian cells. Cytotoxicity was observed in HT-29 cells (IC50=10 nM), and DNA damage was induced at a working concentration as low as 51 nM in intact cells, while DNA damage was induced at a concentration as low as 12 nM in purified and isolated nuclei. Low concentrations of camptothecin can arrest the cell cycle in the S phase and induce apoptosis in a large number of normal or cancerous cells in a cell cycle-dependent or cycle-independent manner.

Materials Supplied and Storage Conditions

Kit components	Size	storage condition
Camptothecin (10 mM in DMSO)	200 μL	-20℃, protected from light

Note:

1. This product is for scientific research use only and is not intended for clinical diagnosis.
2. For different cells, to grope for apoptosis induction of different concentrations of reagents and induction time.
3. This product has cytotoxicity, when operating, please pay attention to the protection, avoid contact with skin.

Assay Procedure

Positive cell apoptosis induction

1. Liquid storage: use this product for the first time, please according to the dosage of single (such as: 50 μL) packaging of dry -20℃ or less dark, avoid repeated freezing and thawing.
2. Working fluid: before the experiment with complete medium dilution camptothecin storing liquid concentration of make it work in 1-10 μM, the optimum concentration of optimizing adjustment according to actual condition. Meanwhile, DMSO diluted in equal multiples of complete culture medium is prepared as the negative control.
3. Operation: within the appropriate petri dish or culture flask culture cell, make its density in 0.5 x 10^6 / mL; Wash the cells twice with PBS; Resuspend the cells in freshly prepared working solution and incubate them in a 37℃, 5% CO2 incubator for 1-24 hours. It is recommended that a time-cycle experiment be conducted for the initial experiment to understand the sensitivity of the cells under study to the apoptosis induction of the drug. Cells were collected by centrifugation and then the apoptotic level was evaluated by an appropriate method.

Recommended Products

Catalog No	Product Name	Recommended Reason
KTA2010	One-step TUNEL Apoptosis Assay Kit (Green Fluorescence)	Detection of cells and tissues apoptosis
KTA2011	One-step TUNEL Apoptosis Assay Kit (Orange Fluorescence)	Detection of cells and tissues apoptosis
KTA4001	Mitochondrial Membrane Potential Assay Kit (JC-1)	Apoptosis was reflected by the change of membrane potential
KTA3022	Caspase-3 Assay Kit (Colorimetric)	Caspase-3 activity reflects apoptosis
KTA3026	Caspase-9 Assay Kit (Colorimetric)	Caspase-9 activity reflects apoptosis
KTA3020	Caspase-1 Assay Kit (Colorimetric)	Caspase-1 activity reflects apoptosis

Disclaimer

The reagent is only used in the field of scientific research, not suitable for clinical diagnosis or other purposes.