

Necroptosis Inducer Kit

Introduction

Programmed necrosis or necroptosis is a novel type of cell death. When apoptosis conditions are lacking (mainly when the caspase enzyme is inhibited), especially in the presence of caspase inhibitors, the tumor necrosis factor receptor family (TNF- α receptor) as well as the Toll-like receptor family initiate, which then activate two protein kinases, RIP1 and RIP3, ultimately causing cell necrosis. Programmed necrosis is an important cell death mechanism that plays an important role in tumors, neurodegenerative diseases, and inflammation.

The Necroptosis Inducer Kit provides a reagent mixed with recombinant human TNF- α , SM-164 and Z-VAD-FMK (TSZ) in a certain ratio, which can effectively induce programmed necrosis of cells. Recombinant human TNF- α is a pro-inflammatory cytokine with multiple functions; SM-164 is a bivalent mimetic of Smac, which can induce TNF- α -dependent apoptosis; and Z-VAD-FMK is a pan-caspase inhibitor that can penetrate cell membranes. The reagent in this kit is a ready-to-use solution that can be used directly to induce apoptosis. For 6-well plates, using 2 mL of cell culture medium per well, the kit can be used for 100 or 500 samples; and for 96-well plates, using 200 μ L of cell culture medium per well, the kit can be used for 1000 or 5000 samples.

Components and Storage

Components	K2712-100 T	K2712-500 T
Necroptosis Inducer Reagent (1000x)	200 μ L	1 mL
Store the reagent at -20°C, stable for 6 months.		

Protocol

1. Dilute the Necroptosis Inducer Reagent (1000x) in cell culture medium at a ratio of 1:1000, and mix thoroughly.
2. Use the cell culture medium containing Necroptosis Inducer Reagent to culture cells for a period to induce apoptosis.

***Note:** For L-929 cells and HT-29 cells, the cell morphology changes obviously after 4 h of treatment. For other cell types, the optimal dilution ratio and induction time of Necroptosis Inducer Reagent (1000x) can be explored on your own.

Note

1. To avoid repeated freeze-thaw cycles as much as possible, this reagent is better to be stored in aliquots.
2. As the mechanism of necroptosis is cell-specific, this reagent is not guaranteed to be used for necroptosis induction in all cells.
3. This reagent is harmful, please pay attention to protection when using it to avoid contact with the human body or inhalation.
4. For your safety and health, please wear lab coats and gloves during the experiment.
5. For research use only. Not to be used in clinical diagnostic or clinical trials.



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