End-Specific Antibody to Detect Apoptosis

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BACKGROUND

Programmed cell death or apoptosis is a critical event in normal cellular differentiation and development as well as in degenerative diseases, cancer and aging. Currently, the most widely used assay for detecting apoptosis is DNA fragmentation. However, since DNA fragmentation can occur in a variety of situations without apoptosis, is a late stage nuclear event in apoptosis, and increases with postmortem time, it is not a reliable indicator of apoptosis.

DESCRIPTION

Researchers at the University of California have developed an antibody that specifically labels apoptotic, but not necrotic cells. This antibody detects the most abundant protein fragments generated by caspases, enzymes that are activated during apoptosis.

APPLICATIONS

The UC antibody can be used to accurately detect the activation of apoptotic machinery. Apoptosis has been shown to play a role in many pathological conditions including Alzheimer's disease, stroke, Huntington's disease, cancer and trauma.

ADVANTAGES

The UC antibody is the first end-specific antibody for the detection of an apoptosis-related event (caspase activation) and offers significant advantages over current DNA fragmentation assays which are widely regarded as non-specific. In addition, because the UC antibody detects the most abundant caspase cleavage product, it is more sensitive than recently available probes which recognize the activated caspase enzymes themselves.

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OTHER INFORMATION

CATEGORIZED AS

- **Biotechnology**
  - Other

RELATED CASES

2000-268-0

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