



## CASPASE FAMILY COLOURIMETRIC SUBSTRATE SET

**Code:** 110-BV-1CSS      **Lot no.:**      **Exp.:** 1 year from date of despatch

**Description:** Ready-to-use colorimetric substrates for assaying activities of members of caspase family proteases. These substrates are formulated in a kit in the ready-to-use format. YVAD is the recognition sequence for caspase-1/ICE. VDVAD is the recognition sequence for caspase-2/ICH-1. DEVD is the recognition sequence for caspase-3/CPP32. WEHD is the recognition sequence for Caspase-5/ICE<sub>rel</sub>III. VEID is the recognition sequence for caspase-6/Mch2. IETD is the recognition sequence for caspase-8/FLICE, and LEHD is the recognition sequence for Caspase-9/Mch6.

**Quantity:** 125 ul (4 mM) each of the following:

Caspase-1 Substrate, Ac-YVAD-pNA	Caspase-6 Substrate, Ac-VEID-pNA
Caspase-2 Substrate, Ac-VDVAD-pNA	Caspase-8 Substrate, Ac-IETD-pNA
Caspase-3 Substrate, Ac-DEVD-pNA	Caspase-9 Substrate, Ac-LEHD-pNA
Caspase-5 Substrate, Ac-WEHD-pNA	

**Storage:** Store at -20 °C.

### Assay Procedure:

1. Induce apoptosis in cells by desired method. Concurrently incubate a control culture *without* induction. Count cells and pellet  $1-5 \times 10^6$  cells.
3. Resuspend cells in 50 ul of chilled Cell Lysis Buffer (Code.# 110-BV-1CLBB) and incubate cells on ice for 10 minutes.
4. Centrifuge for 1 min in a microcentrifuge (10,000 x g).
5. Transfer supernatant (cytosolic extract) to a fresh tube and put on ice.  
Assay protein concentration.  
Dilute 50-200 ug protein to 50 ul Cell Lysis Buffer for each assay.  
Add 50 ul of 2X Reaction Buffer (Code.# 110-BV-1RBA) containing 10 mM DTT (Code # 110-BV-IDTT) to each sample.
9. Add 5 ul each of the 4 mM pNA conjugated substrates (200 uM final conc.) individually and incubate at 37°C for 1-2 hour.  
Read samples at 400- or 405-nm in a microtitre plate reader, or spectrophotometer using a 100-ul micro quartz cuvette (Sigma), or dilute sample to 1 ml with Dilution Buffer (Code # 110-BV-1DBA) and using regular cuvette (note: Dilution of the samples proportionally decreases the reading).  
You may also perform the entire assay directly in a 96-well plate.  
Fold-increase in caspase activity can be determined by comparing these results with the level of the uninduced control.  
Note: Background reading from cell lysates and buffers should be subtracted from the readings of both induced and the uninduced samples before calculating fold increase in caspase activity

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