



## PRODUCT DATA SHEET

### **Product:** Ac-YVAD-CHO (Caspase-1/ICE Inhibitor 2 -CHO)

**Cat. No:** AB-024 (5 mg)

**Chemical Name:**

Acetyl-Tyr-Val-Ala-Asp-CHO

**Formula:**

C<sub>23</sub>H<sub>32</sub>N<sub>4</sub>O<sub>8</sub>

**Molecular Weight:** 492.5

**Description:**

White solid. Peptide aldehyde inhibitor of caspases.

**Introduction:**

Interleukin-1 $\beta$  Converting Enzyme (ICE), also now known as Caspase-1, is a cytoplasmic cysteine protease that cleaves inactive 31 kDa pro-IL-1 $\beta$  to generate the active 17.5 kDa proinflammatory cytokine IL-1 $\beta$ , the predominant form of IL-1 produced by human monocytes. This cytokine has been implicated in the pathogenesis of several diseases such as rheumatoid arthritis, inflammatory bowel disease, and septic shock.

Caspase-1/ICE mRNA is found in a variety of cells such as peripheral blood monocytes, peripheral blood lymphocytes, peripheral blood neutrophils, and resting and activated peripheral blood T-lymphocytes. The tissue distribution of Caspase-1/ICE suggests that the enzyme may have other substrates in addition to IL-1 $\beta$ .

Current hypotheses suggest that Caspase-1/ICE is able to cause apoptosis as well as activate inflammation in animal cells. Experiments have shown that Caspase-1/ICE has sequence homology with other mammalian apoptosis genes and that activation of Caspase-1/ICE or other caspase proteases is required for anti-Fas mAb-induced apoptosis.

**Purity:** >95% by HPLC

**Specificity:**

Ac-YVAD-CHO is a reversible inhibitor of caspase-1 and caspase-4 (K<sub>i</sub>=200 pM for human recombinant caspase-1). It is more selective than Ac-VAD-CHO for caspase-1.

Inhibition of caspases in cell extracts. Ac-YVAD-CHO inhibits anti-Fas induced apoptosis in L929-APO-1 cells. Generally, however, methylated peptide-FMK inhibitors (eg. Caspase-1/ICE Inhibitor 2, Cat No. AB-011) are superior for use on live cells.

**Solubility:**

Soluble in both DMSO and water.

**Protocol:**

It is recommended that stock solutions be prepared in high-purity DMSO (>99.9%), and then diluted into aqueous medium. Stock solutions should not be stored.

**Storage and Stability:**

Store at -20°C, desiccated. Do not store stock solutions. Stable for 6 months when stored as recommended. Stock solutions should be prepared shortly prior to use.

**Limitations:**

For *in vitro* research use only. Not for use in diagnostics or in humans.

**Warranty:**

No warranties, expressed or implied, are made regarding the use of this product. KAMIYA BIOMEDICAL COMPANY is not liable for any damage, personal injury, or economic loss caused by this product.