

Validation data for Ac-YVAD-cmk

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Version 20G29-NJ

Ac-YVAD-cmk (Acetyl-tyrosine-valine-alanine-aspartate-chloromethyl ketone) is a potent and irreversible inhibitor of the inflammatory caspase-1. Caspase-1, also known as IL-1 converting enzyme (ICE), cleaves the precursors of the IL-1 β and IL-18 pro-inflammatory cytokines, as well as the gasdermin D (GSDMD) pore-forming protein upon inflammasome activation. Ac-YVAD-cmk inhibits the mature IL-1 β secretion in a dose dependent manner in THP-1 Null2 monocytes incubated with MSU crystals (Figure 1).

Dose-dependent inhibition

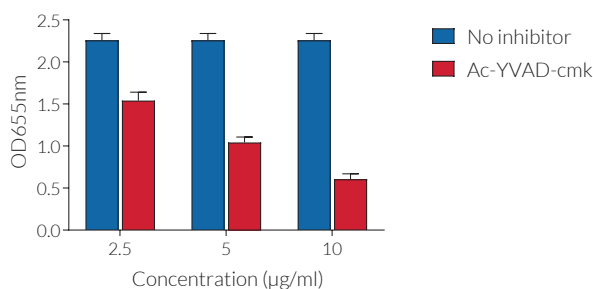


Figure 1: Ac-YVAD-cmk inhibits NLRP3 inflammasome response in a dose-dependent manner.

THP1-Null2 cells were primed with LPS-EK (1 μg/ml) for 3h and then stimulated with MSU crystals (150 μg/ml) and increasing concentrations of Ac-YVAD-cmk. After 24h activation, the secretion of mature IL-1 β in the culture supernatant was assessed using HEK-Blue™ IL-1 β sensor cells and QUANTI-Blue™ Solution detection reagent. The optical density (OD) was read at 655 nm.

TECHNICAL SUPPORT

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