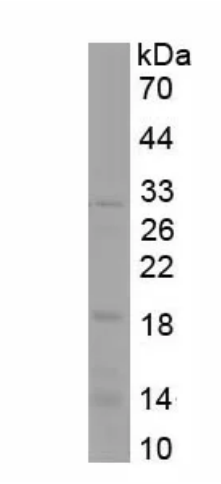
Active Caspase 2 (CASP2)

Catalog#:PEH12301

概述（Summary）

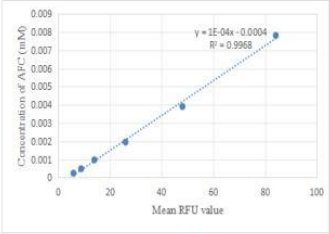
别称（Alternative Names）	ICH1L; NEDD2; ICH-1L/1S; Cysteinyl Aspartate Specific Proteinases 2; Apoptosis-Related Cysteine Peptidase; Neural Precursor Cell Expressed Developmentally Down-Regulated 2
纯度（Purity）	Greater than 90% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Gly170-Thr452】
Accession #	P42575
表达宿主（Host）	E.coli
种属（Species）	Homo sapiens (Human)
预测分子量（Predicted MW）	35.4 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in ddH_2O to a concentration of 0.1-0.3 mg/mL. Do not vortex.
背景介绍（References）	Involved in the activation cascade of caspases responsible for apoptosis execution. Might function by either activating some proteins required for cell death or inactivating proteins necessary for cell survival. Associates with PIDD1 and CRADD to form the PIDDosome, a complex that activates CASP2 and triggers apoptosis in response to genotoxic stress.

电泳图（SDS-PAGE image）



Greater than 90% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）



RFU	AFC (mM)
84.11058	0.0078125
48.01058	0.00390625
25.99058	0.001953125
13.96058	0.000976563
8.83958	0.000488281
5.87658	0.000244141

Figure 1. The standard curve of AFC

One unit of enzyme activity is defined as the 1 µg of enzyme required to convert 1 pmol of Ac-VDVAD-AFC to AFC in 1min at 37°C.

Specific Activity (pmol/min/µg)= $\frac{\Delta RFU * F}{T * N}$

△RFU=Adjusted for Substrate Blank

F=Conversion Factor(convert from standard curve of AFC)

T= Time

N=Amount of enzyme

Caspase-2 (CASP2) is a 30 32 kDa member of the peptidase C14A/IL 1 beta-converting family of enzymes. It is widely expressed and is an integral component of the apoptotic cascade. Based on the length of its prodomain, caspase-2 has been considered to be an initiator caspase. Human procaspase-2 is a 48 51 kDa, 452 amino acid (aa) protein. It is known to exist as a disulfide-linked homodimer via covalent linkage at Cys436. But this dimeric state may not be sufficient for (auto) activation. Actual activation may occur following oligomerization within the context of activating platforms such as DISC (death-inducing signaling complex) or the PIDDosome. The activity assay of recombinant human CASP2 was measured by its ability to cleave the fluorogenic peptide substrate Ac-VDVAD-AFC. The reaction was performed in 25 mM HEPES, 0.1% (w/v) CHAPS, 10 mM dithiothreitol (DTT), pH 7.5 (Assay Buffer). The CASP2 was diluted to 3 ug/ml by assay buffer and incubated at room temperature for 15min. The reaction was initiated by adding 50 ul 3 ug/ml CASP2 to 50 ul of 200 uM substrate and then read at excitation and emission wavelengths of 400 nm and 505 nm (top read), respectively, in kinetic mode for 5 minutes. The specific activity of recombinant human CASP2 is 2100 pmol/min/µg.

注意事项（Note）

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