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Datasheet for 600-401-412

# Caspase-2 Antibody

## Overview

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| **Description:** | Anti-Caspase-2 (RABBIT) Antibody - 600-401-412 |
| **Item No.:** | 600-401-412 |
| **Size:** | 100 µg |
| **Applications:** | ELISA, WB |
| **Reactivity:** | Mouse, Rat |
| **Host Species:** | Rabbit |

## Product Details

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| **Background:** | Apoptosis occurs during normal cellular development and involves dramatic changes in cellular structure. Disruption of apoptosis may contribute to cancer and other diseases. Caspases are a family of cysteine proteases that are key mediators of programmed cell death or apoptosis. Caspase-2 has been called ICH-1 in human, CED-3 in C.elegans and NEDD-2 in mouse. Caspase-2 is synthesized as an inactive precursor that is processed in cells undergoing apoptosis. The precursor form of all caspases is composed of a pro-domain, and large and small catalytic subunits. The active forms of caspases are generated by several stimuli, including ligand-receptor interactions, growth factor deprivation and inhibitors of cellular functions. Caspase-2 is activated in vitro by caspase-1, caspase-3 and granzyme B. Caspase-2 functions as an upstream apoptosis initiator that participates in the activation of downstream caspases, such as caspase-3, caspase-6 and caspase-7. Caspase-2 is highly expressed in embryonic mouse brain but not in adult neural tissue. Alternative mRNA splicing produces a long (48 kDa) and short (35 kDa) form of caspase-2. These forms show tissue specificity and function either as inducers or suppressors of apoptosis. Mature caspase-2 is 435 amino acids in length cleaved (~50 kDa) and is cleaved upon activation into 10 and 20 kDa subunits. |
| **Synonyms:** | rabbit anti-Caspase-2 Antibody, Apoptosis related cysteine peptidase antibody, CASP-2, CASP 2 antibody, Casp 2L Pro antibody, CASP2 antibody, Caspase 2 apoptosis related cysteine protease antibody, Caspase2 antibody, Caspase-2, Developmentally down regulated 2 antibody, ICH 1 antibody, ICH-1, Caspase-2 subunit p18, Caspase-2 subunit p13, Caspase-2 subunit p12 |
| **Host Species:** | Rabbit |
| **Clonality:** | Polyclonal |
| **Format:** | IgG |

## Target Details

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| **Gene Name:** | Casp2 |
| **Reactivity:** | Mouse, Rat |
| **Immunogen Type:** | Conjugated Peptide |
| **Immunogen:** | A synthetic peptide corresponding to the N-terminus of rat Caspase-2 protein conjugated to Keyhole Limpet Hemocyanin (KLH) through a cysteine residue linker. |
| **Purity/Specificity:** | This affinity purified antibody is directed against rat and mouse caspase-2. The antibody detects long and short forms of the protein. Antiserum was purified against the immunizing peptide. This antibody reacts with mouse and rat caspase-2, but not caspase-2 from human sources. Cross reactivity with caspase-2 from other sources has not been determined. Rat and mouse caspase-2 show 94% homology. There is no significant homology to the human form. |
| **Relevant Links:** | • NCBI - AAD33684.1<br>• UniProtKB - P55215<br>• GeneID - 64314 |

## Application Details

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| **Tested Applications:** | ELISA, WB |
| **Application Note:** | This affinity purified polyclonal antibody was tested by ELISA and immunoblotting and was found to be reactive with 48 kDa mouse and rat caspase-2. A control and rat caspase-2 transfected human 293 cell lysate was used to show by immunoblotting that this antibody detects rat caspase-2. No reaction was observed against human caspase-2. Immunoblot of mouse neuronal cell lysates from wild-type and caspase-2 (-/-) mice (not shown) was used to show that this antibody cross reacts with mouse caspase-2. A 1:750 dilution is recommended for immunoblot. This product was assayed against 1.0 µg of immunizing peptide in a standard sandwich ELISA using HRP conjugated Affinity Purified anti-Rabbit IgG [H&L] (Goat) code #611-1302 and TMB as a substrate for 30 minutes at room temperature. A working dilution of 1:1,500 to 1:6,000 is suggested for this product. |
| **Assay Dilutions:** | All assays should be optimized by the user. Recommended dilutions (if any) may be listed below. |
| **ELISA:** | 1:1,500 - 1:6,000 |
| **WB:** | 1:750 |

## Formulation

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| **Physical State:** | Liquid (sterile filtered) |
| **Concentration:** | 0.44 mg/mL by UV absorbance at 280 nm |
| **Buffer:** | 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 |
| **Preservative:** | 0.01% (w/v) Sodium Azide |
| **Stabilizer:** | None |

## Shipping & Handling

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| **Shipping Condition:** | Dry Ice |
| **Storage Condition:** | Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use. |
| **Expiration:** | Expiration date is one (1) year from date of receipt. |

## Images

**Western Blot**
Affinity Purified antibody to Caspase-2 was used at a 1:750 dilution to detect rat caspase-2 in transfected human 292 cell lysates (lane 2) by Western blot. Asterisk indicates a 48 kDa caspase-2 protein clearly detected in the rat caspase-2 transfected lysate. No reaction is observed against human caspase-2. Control (lane 1) and transfected (lane 2) lysates were loaded on a 4-20% gel for SDS-PAGE. After primary antibody incubation and washing, a 1:5,000 dilution of HRP conjugated Gt-a-Rabbit IgG (611-103-122) preceded color development using Amersham's substrate system. Other detection methods will yield similar results.

## Disclaimer

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