Caspase-4 Antibody

For Research Use Only. Not For Use In Diagnostic Procedures.

**Background:** Caspase-4 (TX/ICH-2/ICErelII) is a member of the caspase family of proteases that play a key role in the execution of apoptosis and activation of inflammatory cytokines (1-3). Expression of caspase-4 has been observed in most tissues except brain, with highest levels in placenta, lung, spleen, and peripheral blood lymphocytes (PBL). Caspase-4 was originally found to contribute to Fas-mediated apoptosis (4). Several caspases (including caspase-4, caspase-5, and mouse caspase-11 and -12) are most closely related to caspase-1 and are capable of inducing apoptosis when over-expressed but are better characterized in the proteolytic activation of inflammatory cytokines (5). Caspase-4 associates with TRAF6 and is involved in the LPS inducible production of inflammatory cytokines IL-8 and MIP1 in THP-1 cells (6). While caspase-4 and mouse caspase-12 localize to the endoplasmic reticulum (ER) and may be activated by drugs that induce ER-stress (7), at least one study suggests that caspase-4 and caspase-12 are not essential for the ER-stress induced apoptosis (8).

**Specificity/Sensitivity:** Caspase-4 Antibody detects endogenous levels of total caspase-4 protein. Processing intermediate forms of caspase-4 are observed at 40 kDa and 32 kDa as previously reported (7). The antibody does not cross-react with other caspases.

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ile125 within the p20 subunit of human caspase-4 protein. Antibodies were purified by protein A and peptide affinity chromatography.

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

**Recommended Antibody Dilutions:** Western blotting 1:1000

**Background References:**

Western blot analysis of extracts from KARPAS-299, THP-1 and IM-9 cells using Caspase-4 Antibody.

Western blot analysis of extracts from recombinant, active caspase-1, -4, and -5 using Caspase-4 Antibody.

**IMPORTANT:** For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.