PYCARD Ab

Cat.#: DF6304  Concn.: 1mg/ml  Mol.Wt.: 25kDa
Size: 100ul,200ul  Source: Rabbit  Clonality: Polyclonal

Reactivity:  Human,Mouse,Rat
Purification:  Immunogen affinity purified
Specificity:  PYCARD Ab detects endogenous levels of total PYCARD
Immunogen:  A synthesized peptide derived from human PYCARD
Uniprot:  Q9ULZ3

Description:  TMS1 (target of methylation-induced silencing)/ASC (apoptosis-associated speck-like protein containing a CARD), also referred to as PYCARD and CARD5, is a 22-kDa pro-apoptotic protein containing an N-terminal pyrin domain (PYD) and a C-terminal caspase recruitment domain (CARD) (1-2). The TMS1 gene was originally found to be aberrantly methylated and silenced in breast cancer cells (2), and has since been found to be silenced in a number of other cancers, including ovarian cancer (3), glioblastoma (4), melanoma (5), gastric cancer (6), lung cancer (7), and prostate cancer (8). Expression of TMS1 can be induced by pro-apoptotic/inflammatory stimuli (9). During apoptosis TMS1 is re-distributed from the cytosol to the mitochondria and associates with mitochondrial Bax to trigger cytochrome c release and subsequent apoptosis (10). TMS1 has also been found to be a critical component of inflammatory signaling where it associates with and activates caspase-1 in response to pro-inflammatory signals (11).

Subcellular Location:  Cytoplasm. Upstream of caspase activation, a redistribution from the cytoplasm to the aggregates occurs. These appear as hollow, perinuclear spherical, ball-like structures.


Similarity:  The CARD domain mediates interaction with CASP1 and
NLRC4 (PubMed:14634131 and PubMed:11967258). The pyrin domain mediates homotypic interactions with pyrin domains of proteins such as of NLRP3, PYDC1, PYDC2 and AIM2.

Storage Condition and Buffer: Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at -20°C. Stable for 12 months from date of receipt.

Western blot analysis of A549 whole cell lysates, using PYCARD Ab. The lane on the left is treated with the antigen-specific peptide.

DF6304 staining RAW264.7 cells by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25°C. The primary Ab was diluted at 1/200 and incubated with the sample for 1 hour at 37°C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab (Cat.# S0006), diluted at 1/600, was used as secondary Ab.

DF6304 at 1/100 staining Mouse lung tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the Ab for 1.5 hours at 22°C. An HRP conjugated goat anti-rabbit Ab was used as the secondary.

**IMPORTANT:** For western blot, incubate membrane with diluted Ab in 5% w/v milk, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.