

PE anti-ASC Antibody

Catalog# / Size	676503 / 25 tests 676504 / 100 tests
Clone	O93E9
Regulatory Status	RUO
Other Names	PYD and CARD domain-containing protein (PYCARD), Apoptosis-associated speck-like protein containing a CARD, Caspase recruitment domain protein 5, Target of methylation-induced silencing (TMS1)
Isotype	Mouse IgG1, κ
Description	Apoptosis-associated speck-like protein containing a CARD (ASC), also known as target of methylation-mediated silencing (TMS1), PYD, and CARD domain containing protein (PYCARD), is a 21.6 kD pro-apoptotic protein that contains a N-terminal pyrin domain (PYD) and a C-terminal caspase recruitment domain (CARD). The TMS1 gene was originally found to be aberrantly methylated and silenced in various cancer cells. Expression of ASC can be induced by pro-apoptotic/inflammatory stimuli. In normal cells, this protein is localized to the cytoplasm. However, in cells undergoing apoptosis, it forms ball-like aggregates near the nuclear periphery. During apoptosis, ASC translocates from the cytosol to the mitochondria and associates with mitochondrial Bax to trigger cytochrome c release and subsequent apoptosis. The adaptor molecule ASC mediates AIM2-dependent caspase-1 activation. Also, the AIM2/ASC complex can act as a novel caspase-8 activation platform. Recent studies have shown that ASC reduces the phosphorylation of IKK α / β phosphorylation and inhibits NF- κ B activity in primary melanoma. However, in metastatic melanoma through, it has the opposite function enhancing NF- κ B activity and the secretion of IL-1 β .

Product Details

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Full length recombinant human PYCARD (NP_037390) produced in <i>E. coli</i> .
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography and conjugated with PE under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration and expiration, please enter the lot number in our Certificate of Analysis online tool.)
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	ICFC - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by intracellular flow cytometry using our Cyto-Fast™ Fix/Perm Buffer Set. For flow cytometric staining, the suggested use of this reagent is 5 μ L per per 10 ⁶ cells in 100 μ L volume. It is highly recommended that the reagent be titrated for optimal performance for each application.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
RRID	AB_3717205 (BioLegend Cat. No. 676503) AB_3717205 (BioLegend Cat. No. 676504)

Antigen Details

Structure	Full-length ASC (fASC) contains 195 amino acids with a predicted molecular weight of 21.6 kD. The sequence of isoform ASC-b is missing 93-111 a.a. The sequence of isoform ASC-c is missing 26-85 a.a.
Distribution	Cytoplasm. In resting monocytes and macrophages, the nucleus is the primary localization.
Function	ASC promotes caspase-mediated apoptosis. This pro-apoptotic activity is mediated predominantly through the activation of caspase-9. ASC is an integral component of the inflammasome. Within the inflammasome, ASC links caspase-1 and NOD-like receptors (NLR), which lead to the activation of caspase-1.
Ligand/Receptor	CIAS1/PYPAF1 and PYDC1.
Cell Type	Dendritic cells
Biology Area	Angiogenesis, Cell Biology, Immunology, Innate Immunity, Neuroscience, Signal Transduction
Antigen References	1. Masumoto J, <i>et al.</i> 1999. <i>J. Biol. Chem.</i> 274:33835. 2. Conway KE, <i>et al.</i> 2000. <i>Cancer Res.</i> 60:6236. 3. Strong R, <i>et al.</i> 1991. <i>Brain Res.</i> 542:23. 4. Srinivasula SM, <i>et al.</i> 2002. <i>J. Biol. Chem.</i> 277:21119. 5. Ohtsuka T, <i>et al.</i> 2004. <i>Nat. Cell Biol.</i> 6:121. 6. Ippagunta SK, <i>et al.</i> 2010. <i>J. Biol. Chem.</i> 285:12454. 7. Liu W, <i>et al.</i> 2013. <i>J. Invest Dermatol.</i> 2:518-527.
Gene ID	29108

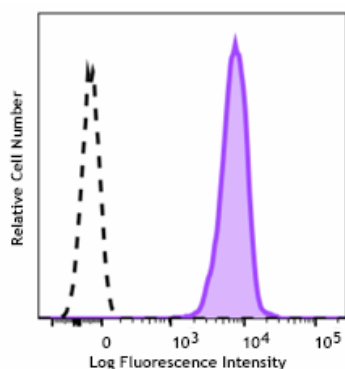
Related Protocols

- [Intracellular Flow Cytometry Staining Protocol](#)

Other Formats

Purified anti-ASC, PE anti-ASC

Product Data



HL-60 cells (human leukemia cell line) were fixed and permeabilized with Cyto-Fast™ Fix/Perm Buffer (Cat. No. 426803), and then intracellularly stained with anti-ASC (clone O93E9) PE (filled histogram). Open histogram represents unstained cells.

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