Revision 1

Store at +4C

#23640

ASC/TMS1 (D2W8U) Rabbit mAb (Alexa Fluor® 647 Conjugate)

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355) orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
IF-F, IF-IC	M	Endogenous	Rabbit IgG	#Q9EPB4	66824

Product Usage Information

Application	Dilution
Immunofluorescence (Frozen)	1:50
Immunofluorescence (Immunocytochemistry)	1:50

Storage

Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.

Specificity/Sensitivity

ASC/TMS1 (D2W8U) Rabbit mAb (Alexa Fluor® 647 Conjugate) recognizes endogenous levels of total ASC protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant mouse ASC protein.

Description

This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 647 fluorescent dye and tested in-house for direct immunofluorescent analysis in mouse cells. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated ASC/TMS1 (D2W8U) Rabbit mAb #67824.

Background

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 *ASC/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 ASC/TMS1 can be induced by pro-apoptotic/inflammatory stimuli (9). During apoptosis ASC/TMS1 is re-distributed from the cytosol to the mitochondria and associates with mitochondrial Bax to trigger cytochrome c release and subsequent apoptosis (10). ASC/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).

Background References

1. Masumoto, J. et al. (1999) *J Biol Chem* 274, 33835-8.
2. Conway, K.E. et al. (2000) *Cancer Res* 60, 6236-42.
3. Terasawa, K. et al. (2004) *Clin Cancer Res* 10, 2000-6.
4. Stone, A.R. et al. (2004) *Am J Pathol* 165, 1151-61.
5. Guan, X. et al. (2003) *Int J Cancer* 107, 202-8.
6. Moriai, R. et al. (2002) *Anticancer Res* 22, 4163-8.
7. Virmani, A. et al. (2003) *Int J Cancer* 106, 198-204.
8. Das, P.M. et al. (2006) *Mol Cancer* 5, 28.
9. Strong, R. et al. (1991) *Brain Res* 542, 23-8.
10. Ohtsuka, T. et al. (2004) *Nat Cell Biol* 6, 121-8.
11. Srinivasula, S.M. et al. (2002) *J Biol Chem* 277, 21119-22.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Applications Key

IF-F: Immunofluorescence (Frozen) **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

M: Mouse

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