

# Product Datasheet

## ASC/TMS1 Antibody - BSA Free NBP1-78977

Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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**NBP1-78977**

ASC/TMS1 Antibody - BSA Free

Product Information	
Unit Size	0.1 ml
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.05% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS
Product Description	
Host	Rabbit
Gene ID	29108
Gene Symbol	PYCARD
Species	Human, Mouse, Rat
Reactivity Notes	Reactivity with Rat reported in PMID 24464748
Immunogen	This ASC/TMS1 Antibody was developed against a synthetic peptide made to an N-terminal portion of the human ASC/TMS1 protein (between residues 1-50) [Uniprot: Q9ULZ3]
Product Application Details	
Applications	Western Blot, Simple Western, Flow Cytometry, Flow (Intracellular), Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin, Immunomicroscopy, Immunoprecipitation
Recommended Dilutions	Western Blot 2.0 - 4.0 ug/ml, Simple Western 1:1000, Flow Cytometry 1 - 2 ug/ml. Use reported in scientific literature (PMID 31214205), Immunohistochemistry 1:400, Immunocytochemistry/ Immunofluorescence 1:40-1:100, Immunoprecipitation reported in scientific literature (PMID 31551961), Immunohistochemistry-Paraffin 1:400, Immunomicroscopy reported in scientific literature (PMID 31054188), Flow (Intracellular) 1 - 2 ug/ml. Use reported in scientific literature (PMID 35095880)
Application Notes	Prior to immunostaining paraffin tissues, antigen retrieval with sodium citrate buffer (pH 6.0) is recommended. In Simple Western only 10 - 15 uL of the recommended dilution is used per data point. See <a href="#">Simple Western Antibody Database</a> for Simple Western validation: Tested in MCF-7 lysate 0.5 mg/mL, separated by Size, antibody dilution of 1:1000, apparent MW was 27 kDa. Separated by Size-Wes, Sally Sue/Peggy Sue.

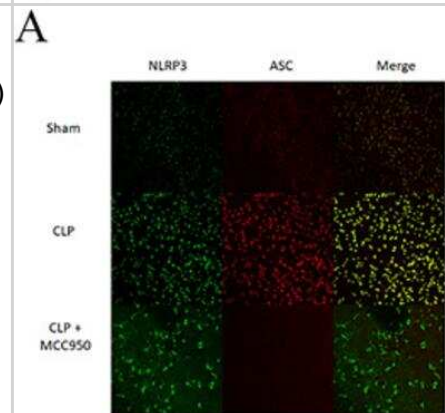


## Images

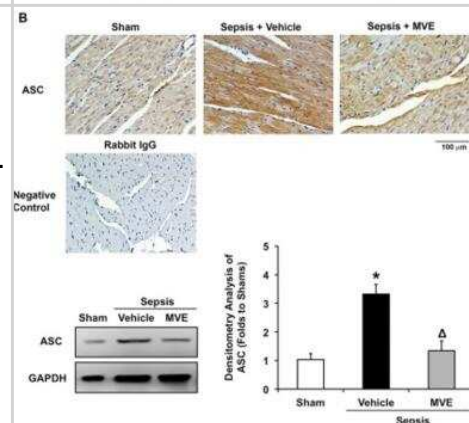
**Simple Western: ASC/TMS1 Antibody [NBP1-78977]** - Lane view shows a specific band for ASC TMS1 in 0.5 mg/ml of MCF-7 lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.



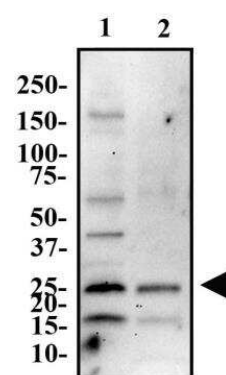
**Immunocytochemistry/Immunofluorescence: ASC/TMS1 Antibody [NBP1-78977]** - NLRP3 activation was evaluated by visualizing the co-localization of NLRP3 and apoptosis-associated speck-like protein (ASC) using immunocytochemistry (A). PLoS One. 2020 Jun 17;15(6):e0234039. doi: 10.1371/journal.pone.0234039. (Catalog # NBP1-78977AF647)



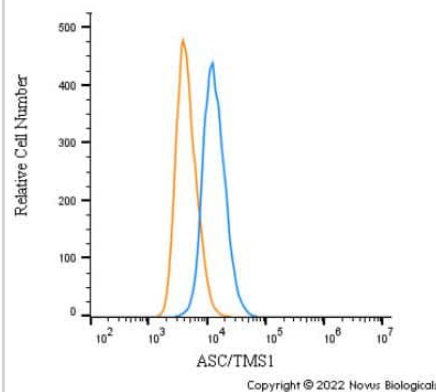
**Immunohistochemistry: ASC/TMS1 Antibody [NBP1-78977]** - Rats were infected by *S. pneumoniae* or given PBS sham control. 21.5 umoles/kg Mito-Vit-E (MVE) or vehicle was administered orally 30 minutes post-inoculation, and heart tissues were harvested 24 hours later. Heart sections were co-stained with anti-ASC (brown) and haematoxylin (blue). Negative control was stained with secondary antibody alone. Images are representative of a random selection of at least 3 sections of N = 6. PLoS One. 2015 Oct 8;10(10):e0139416. doi: 10.1371/journal.pone.0139416.



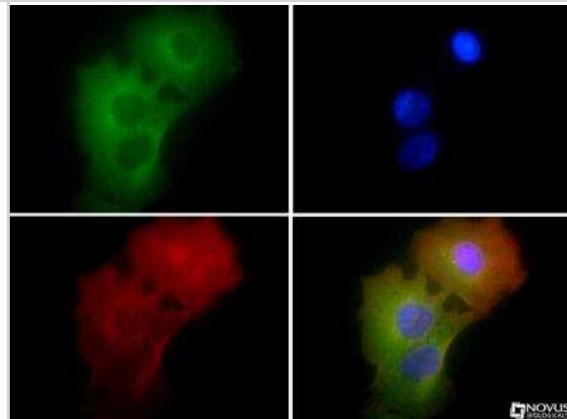
**Western Blot: ASC/TMS1 Antibody [NBP1-78977]** - Whole cell protein from (1) THP1 and (2) HL60 was separated on a 4-15% gel by SDS-PAGE, transferred to 0.2 um PVDF membrane and blocked in 5% non-fat milk in TBST. The membrane was probed with 4.0 ug/ml anti-ACS/TMS1 in 1% milk, and detected with an anti-rabbit HRP secondary antibody using chemiluminescence.



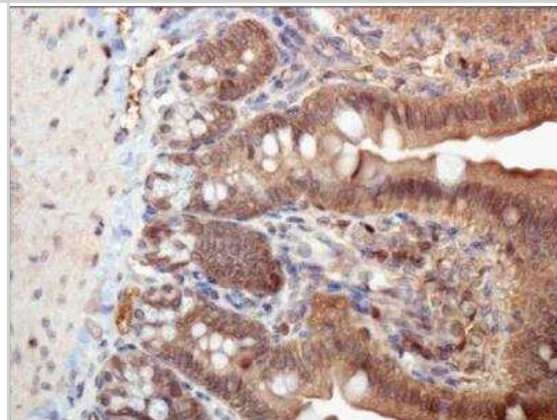
**Flow Cytometry: ASC/TMS1 Antibody - BSA Free [NBP1-78977]** - An intracellular stain was performed on MCF7 cells with ASC/TMS1 NBP1-78977 (blue) and a matched isotype control NBP2-24891 (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 1 ug/mL for 30 minutes at room temperature, followed by Rabbit IgG (H+L) Cross-Adsorbed Secondary Antibody, Dylight 550 (SA5-10033, Thermo Fisher).



**Immunocytochemistry/Immunofluorescence: ASC/TMS1 Antibody [NBP1-78977]** - Tested in MCF-7 cells with FITC (green). Nuclei and alpha-tubulin were counterstained with DAPI (blue) and DyLight 550 (red).



**Immunohistochemistry: ASC/TMS1 Antibody [NBP1-78977]** - Tested in mouse intestine at a 1:400 dilution.



## Publications

David L, Borges JP, Hollingsworth LR, Volchuk A et Al. NINJ1 mediates plasma membrane rupture by cutting and releasing membrane disks Cell 2024-04-13 [PMID: 38614101]

Chen XC, Huang LF, Tang JX et Al. Asiatic acid alleviates cisplatin-induced renal fibrosis in tumor-bearing mice by improving the TFEB-mediated autophagy-lysosome pathway Biomed Pharmacother 2023-08-17 [PMID: 37413899]

Yan Q, Li P, Liu S et al. Dihydromyricetin treats pulmonary hypertension by modulating CKLF1/CCR5 axis-induced pulmonary vascular cell pyroptosis. Biomedicine & pharmacotherapy = Biomedecine & pharmacotherapie 2024-10-25 [PMID: 39461017]

Borges-Rodriguez M, Shields CA, Travis OK et al. Platelet Inhibition Prevents NLRP3 Inflammasome Activation and Sepsis-Induced Kidney Injury International Journal of Molecular Sciences 2021-09-25 [PMID: 34638670]

Francesca Ferrara, Alessandra Pecorelli, Erika Pambianchi, Stacy White, Hina Choudhary, Alice Casoni, Giuseppe Valacchi Vitamin C compounds mixture prevents skin barrier alterations and inflammatory responses upon real life multi pollutant exposure. Experimental dermatology 2024-01-30 [PMID: 38284201]

Xiaoyu Yan, Pengyu Fu, Yimin Zhang, Dongmei Ling, Lewis Reynolds, Weicheng Hua, Zhiyuan Wang, Fangyuan Ma, Boxuan Li, Jingjing Yu, Yujia Liu, Lijing Gong, Enming Zhang, Béla Juhász MCC950 Ameliorates Diabetic Muscle Atrophy in Mice by Inhibition of Pyroptosis and Its Synergistic Effect with Aerobic Exercise Molecules 2024-02-04 [PMID: 38338456]

Hung-Jen Shih, Chao-Yuan Chang, Chung-Howe Lai, Chun-Jen Huang Therapeutic effect of modulating the NLRP3-regulated transforming growth factor- $\beta$  signaling pathway on interstitial cystitis/bladder pain syndrome. Biomedicine & pharmacotherapy = Biomedecine & pharmacotherapie 2021-08-03 [PMID: 34311526]

Francesca Ferrara, Xi Yan, Alessandra Pecorelli, Anna Guiotto, Sante Colella, Arianna Pasqui, John Ivansson, Stephen Lynch, Sara Anderias, Hina Choudhary, Stacy White, Giuseppe Valacchi Combined exposure to UV and PM affect skin oxinflammatory responses and it is prevented by antioxidant mix topical application: Evidences from clinical study. Journal of cosmetic dermatology 2024-04-08 [PMID: 38590207]

Long J, Sun Y, Liu S et al. Ginsenoside Rg1 treats ischemic stroke by regulating CKLF1/CCR5 axis-induced neuronal cell pyroptosis Phytomedicine 2023-11-01 [PMID: 38128394] (Western Blot, Rat)

McElwain CJ, Musumeci A, Manna S et al. L-ergothioneine reduces mitochondrial-driven NLRP3 activation in gestational diabetes mellitus Journal of reproductive immunology 2023-11-24 [PMID: 38029485] (WB, Human)

Ivansson J, Ferrara F, Vallese A et al. Comparison of Pollutant Effects on Cutaneous Inflammasomes Activation International Journal of Molecular Sciences 2023-11-23 [PMID: 38068996] (WB, IHC, Human)

Quan JH, Gao FF, Ma TZ et al. Toxoplasma gondii induces pyroptosis in human placental trophoblast and amniotic cells by inducing ROS production and activation of cathepsin B and NLRP1/NLRP3/NLRC4/AIM2 inflammasome The American journal of pathology 2023-09-21 [PMID: 37741453] (IHC-P, Mouse)

More publications at <http://www.novusbio.com/NBP1-78977>



## Procedures

### Immunohistochemistry-Paraffin Embedded Sections protocol specific for TMS1 antibody (NBP1-78977)

#### Immunohistochemistry-Paraffin Embedded Sections

##### Antigen Unmasking:

Bring slides to a boil in 10 mM sodium citrate buffer (pH 6.0) then maintain at a sub-boiling temperature for 10 minutes. Cool slides on bench-top for 30 minutes.

##### Staining:

1. Wash sections in deionized water three times for 5 minutes each.
2. Wash sections in wash buffer for 5 minutes.
3. Block each section with 100-400 ul blocking solution for 1 hour at room temperature.
4. Remove blocking solution and add 100-400 ul diluted primary antibody. Incubate overnight at 4C.
5. Remove antibody solution and wash sections in wash buffer three times for 5 minutes each.
6. Add 100-400 ul biotinylated diluted secondary antibody. Incubate 30 minutes at room temperature.
7. Remove secondary antibody solution and wash sections three times with wash buffer for 5 minutes each.
8. Add 100-400 ul Streptavidin-HRP reagent to each section and incubate for 30 minutes at room temperature.
9. Wash sections three times in wash buffer for 5 minutes each.
10. Add 100-400 ul DAB substrate to each section and monitor staining closely.
11. As soon as the sections develop, immerse slides in deionized water.
12. Counterstain sections in hematoxylin.
13. Wash sections in deionized water two times for 5 minutes each.
14. Dehydrate sections.
15. Mount coverslips.

\*The above information is only intended as a guide. The researcher should determine what protocol best meets their needs. Please follow safe laboratory procedures.

### Immunocytochemistry/Immunofluorescence protocol for ASC/TMS1 Antibody (NBP1-78977)

#### Immunocytochemistry Protocol

Culture cells to appropriate density in 35 mm culture dishes or 6-well plates.

1. Remove culture medium and add 10% formalin to the dish. Fix at room temperature for 30 minutes.
2. Remove the formalin and add ice cold methanol. Incubate for 5-10 minutes.
3. Remove methanol and add washing solution (i.e. PBS). Be sure to not let the specimen dry out. Wash three times for 10 minutes.
4. To block nonspecific antibody binding incubate in 10% normal goat serum from 1 hour to overnight at room temperature.
5. Add primary antibody at appropriate dilution and incubate at room temperature from 2 hours to overnight at room temperature.
6. Remove primary antibody and replace with washing solution. Wash three times for 10 minutes.
7. Add secondary antibody at appropriate dilution. Incubate for 1 hour at room temperature.
8. Remove antibody and replace with wash solution, then wash for 10 minutes. Add Hoechst 33258 to wash solution at 1:25,000 and incubate for 10 minutes. Wash a third time for 10 minutes.
9. Cells can be viewed directly after washing. The plates can also be stored in PBS containing Azide covered in Parafilm (TM). Cells can also be cover-slipped using Fluoromount, with appropriate sealing.

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### **Products Related to NBP1-78977**

HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control
NBP1-78977AF647	ASC/TMS1 Antibody [Alexa Fluor® 647]

### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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