### **Product Datasheet**

## RIPK1/RIP1 Antibody - BSA Free NBP1-77077

Unit Size: 0.1 mg

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

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#### NBP1-77077

**Product Information** 

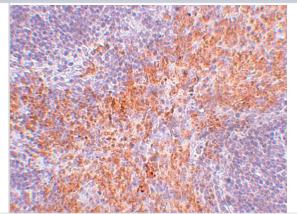
RIPK1/RIP1 Antibody - BSA Free

1 Todact Illiorniation	
Unit Size	0.1 mg
Concentration	1 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Peptide affinity purified
Buffer	PBS
Target Molecular Weight	70.7 kDa
<b>Product Description</b>	
-	
Description	Novus Biologicals Rabbit RIPK1/RIP1 Antibody - BSA Free (NBP1-77077) is a polyclonal antibody validated for use in IHC, WB, ELISA and ICC/IF. Anti-RIPK1/RIP1 Antibody: Cited in 20 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
•	polyclonal antibody validated for use in IHC, WB, ELISA and ICC/IF. Anti-RIPK1/RIP1 Antibody: Cited in 20 publications. All Novus Biologicals antibodies
Description	polyclonal antibody validated for use in IHC, WB, ELISA and ICC/IF. Anti-RIPK1/RIP1 Antibody: Cited in 20 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Description  Host	polyclonal antibody validated for use in IHC, WB, ELISA and ICC/IF. Anti-RIPK1/RIP1 Antibody: Cited in 20 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.  Rabbit
Description  Host Gene ID	polyclonal antibody validated for use in IHC, WB, ELISA and ICC/IF. Anti-RIPK1/RIP1 Antibody: Cited in 20 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.  Rabbit  8737
Description  Host Gene ID Gene Symbol	polyclonal antibody validated for use in IHC, WB, ELISA and ICC/IF. Anti-RIPK1/RIP1 Antibody: Cited in 20 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.  Rabbit  8737  RIPK1
Description  Host Gene ID Gene Symbol Species	polyclonal antibody validated for use in IHC, WB, ELISA and ICC/IF. Anti-RIPK1/RIP1 Antibody: Cited in 20 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.  Rabbit  8737  RIPK1  Human, Mouse, Rat  Antibody was raised against a 15 amino acid synthetic peptide from near the amino terminus of human RIPK1. The immunogen is located within amino acids

# Applications Western Blot, Immunohistochemistry-Paraffin, ELISA, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Knockdown Validated Recommended Dilutions Western Blot 1 ug/ml, ELISA 1:100-1:2000, Immunohistochemistry 2.5 ug/ml, Immunocytochemistry/ Immunofluorescence 20 ug/ml, ImmunohistochemistryParaffin 2.5 ug/ml, Knockdown Validated

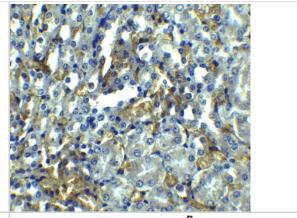
#### **Images**

Immunohistochemistry: RIPK1/RIP1 Antibody - BSA Free [NBP1-77077] - Immunohistochemistry of RIPK1/RIP1 in mouse kidney tissue with RIPK1/RIP1 antibody at 2.5 ug/mL.



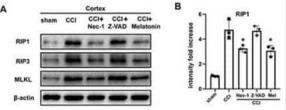


Immunohistochemistry: RIPK1/RIP1 Antibody - BSA Free [NBP1-77077] - Immunohistochemistry of RIPK1/RIP1 in mouse kidney tissue with RIPK1/RIP1 antibody at 2.5 ug/ml.



Western Blot: RIPK1/RIP1 Antibody [NBP1-77077] - At 6 h after CCI, RIP1 protein levels in the cortex detected by western blotting were decreased in Nec-1 and melatonin pretreatment groups, but there was no change in the Z-VAD pretreatment group. Values are represented as means +/- SEM (n = 3). B-actin was used as a control in western blot assays. All data were analyzed by one way ANOVA plus Tukey's test. \*P < 0.05 and \*\*P < 0.01 vs. CCI group. Image collected and cropped by CiteAb from the following publication

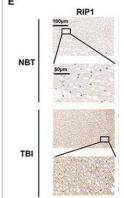
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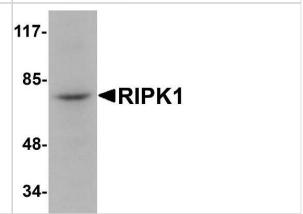
Immunohistochemistry: RIPK1/RIP1 Antibody [NBP1-77077] - Traumatic brain injury (TBI) tissues show increased necroptosis compared with normal brain tissues (NBTs). The expression of RIP1 was tested in NBT and TBI tissues from Jiangsu Province Hospital by

immunohistochemistry. Image collected and cropped by CiteAb from the following publication

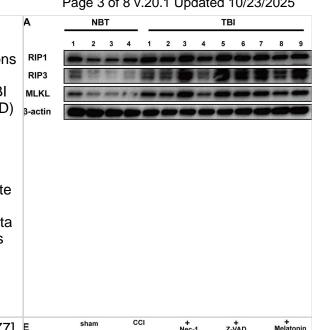
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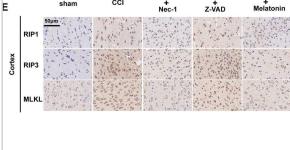
Western Blot: RIPK1/RIP1 Antibody [NBP1-77077] - Rat kidney tissue lysate with RIPK1 antibody at 1 ug/mL.



Western Blot: RIPK1/RIP1 Antibody - BSA Free [NBP1-77077] -Traumatic brain injury (TBI) tissues show increased necroptosis compared with normal brain tissues (NBTs). (A) The protein expressions of receptor-interacting protein 1 (RIP1), RIP3 & mixed lineage kinase domain-like protein (MLKL) were analyzed in human NBT (n = 4) & TBI tissues (n = 9) via western blotting.  $\beta$ -actin was used as a control. (B–D) Protein expression of RIP1, RIP3 & MLKL was analyzed by statistical. (E) The expressions of RIP1, RIP3 & MLKL were tested in NBT & TBI tissues from Jiangsu Province Hospital by immunohistochemistry. (F) Electron microscopy was used to examine human normal brain & TBI tissues. Intact cell membrane (violet arrow) is labeled in NBT. Complete & continuous nuclear membrane (black arrow), swollen mitochondria (green arrow) & vacuoles (red arrow) are labeled in TBI tissues. All data were analyzed by one way analysis of variance (ANOVA) plus Tukey's test. \*\*P < 0.01 vs. NBT group. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/31607859), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

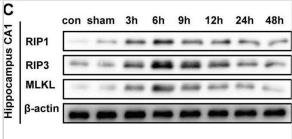


Immunohistochemistry: RIPK1/RIP1 Antibody - BSA Free [NBP1-77077] | E Effect of Nec-1, Z-VAD & melatonin on necroptosis. (A) At 6 h after CCI, RIP1, RIP3 & MLKL protein levels in the cortex detected by western blotting were decreased in Nec-1 & melatonin pretreatment groups, but there was no change in the Z-VAD pretreatment group. (B–D) Protein expression of RIP1, RIP3 & MLKL was analyzed by statistical. (E) Immunohistochemistry assays examined the effect of Nec-1, Z-VAD & melatonin on cortex RIP1, RIP3 & MLKL, respectively. (F) At 6 h after CCI, RIP1, RIP3 & MLKL protein levels in the hippocampus CA1 detected by western blotting were decreased in the Nec-1 & melatonin pretreatment groups, but not the Z-VAD pretreatment group. (G-I) Protein expression of RIP1, RIP3 & MLKL was analyzed by statistical. (J) Immunohistochemistry assays examined the effect of Nec-1, Z-VAD & melatonin on RIP1, RIP3 & MLKL in hippocampus CA1, respectively. (K) TdT-mediated dUTP Nick-End Labeling (TUNEL; green) & cleaved caspase-3 (red) dual immunofluorescent labeling was used & were analyzed by statistical (L,M) in the five groups. Values are represented as means  $\pm$  SEM (n = 3).  $\beta$ -actin was used as a control in western blot assays. All data were analyzed by one way ANOVA plus Tukey's test. \*P < 0.05 & \*\*P < 0.01 vs. CCI group. Image collected & cropped by CiteAb from the following publication



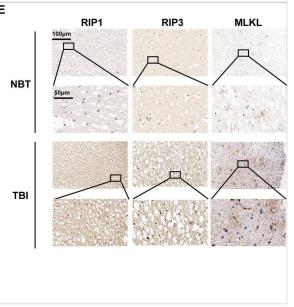
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Western Blot: RIPK1/RIP1 Antibody - BSA Free [NBP1-77077] - Tissues C were obtained to perform western blot assays. (A) Location of collected tissues was labeled. Collected cortical tissues & hippocampus CA1 were marked by white & yellow frame, respectively, RIP1, RIP3 & MLKL in the (B) cortex & (C) hippocampus CA1 were examined via western blot from 0 h to 48 h after controlled cortical impact (CCI). Protein expression of RIP1, RIP3 & MLKL in the (D-F) cortex & (G-I) hippocampus CA1 from 0 h to 48 h after CCI was analyzed by statistical. Values are represented as means  $\pm$  SEM (n = 3-4). (J) Cleaved caspase-3 was detected in cortex & hippocampus CA1 via western blotting from 0 h to 48 h after CCI. (K,L) Protein expression of cleaved caspase-3 in the cortex & hippocampus CA1 from 0 h to 48 h after CCI was measured. Values are represented as means  $\pm$  SEM (n = 4–5). (M) Cleaved caspase-8 was detected in cortex & hippocampus CA1 via western blotting from 0 h to 48 h after CCI. (N,O) Protein expression of cleaved caspase-8 in the cortex & hippocampus CA1 from 0 h to 48 h after CCI was analyzed. Values are represented as means ± SEM (n = 4–5). β-actin was used as a control in western blot assays. All data were analyzed by one way ANOVA plus Tukey's test. \*P < 0.05 & \*\*P < 0.01 vs. sham group. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/31607859), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Immunohistochemistry: RIPK1/RIP1 Antibody - BSA Free [NBP1-77077] F - Traumatic brain injury (TBI) tissues show increased necroptosis compared with normal brain tissues (NBTs). (A) The protein expressions of receptor-interacting protein 1 (RIP1), RIP3 & mixed lineage kinase domain-like protein (MLKL) were analyzed in human NBT (n = 4) & TBI tissues (n = 9) via western blotting.  $\beta$ -actin was used as a control. (B–D) Protein expression of RIP1, RIP3 & MLKL was analyzed by statistical. (E) The expressions of RIP1, RIP3 & MLKL were tested in NBT & TBI tissues from Jiangsu Province Hospital by immunohistochemistry. (F) Electron microscopy was used to examine human normal brain & TBI tissues. Intact cell membrane (violet arrow) is labeled in NBT. Complete & continuous nuclear membrane (black arrow), swollen mitochondria (green arrow) & vacuoles (red arrow) are labeled in TBI tissues. All data were analyzed by one way analysis of variance (ANOVA) plus Tukey's test. \*\*P < 0.01 vs. NBT group. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/31607859), licensed under a CC-BY

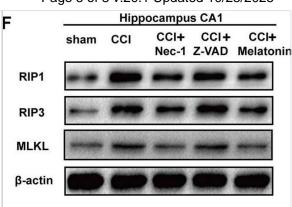
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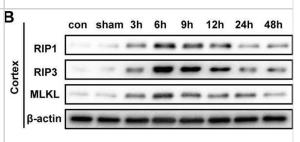


Western Blot: RIPK1/RIP1 Antibody - BSA Free [NBP1-77077] - Effect of F Nec-1, Z-VAD & melatonin on necroptosis. (A) At 6 h after CCI, RIP1, RIP3 & MLKL protein levels in the cortex detected by western blotting were decreased in Nec-1 & melatonin pretreatment groups, but there was no change in the Z-VAD pretreatment group. (B-D) Protein expression of RIP1, RIP3 & MLKL was analyzed by statistical. (E) Immunohistochemistry assays examined the effect of Nec-1, Z-VAD & melatonin on cortex RIP1, RIP3 & MLKL, respectively. (F) At 6 h after CCI, RIP1, RIP3 & MLKL protein levels in the hippocampus CA1 detected by western blotting were decreased in the Nec-1 & melatonin pretreatment groups, but not the Z-VAD pretreatment group. (G-I) Protein expression of RIP1, RIP3 & MLKL was analyzed by statistical. (J) Immunohistochemistry assays examined the effect of Nec-1, Z-VAD & melatonin on RIP1, RIP3 & MLKL in hippocampus CA1, respectively. (K) TdT-mediated dUTP Nick-End Labeling (TUNEL; green) & cleaved caspase-3 (red) dual immunofluorescent labeling was used & were analyzed by statistical (L,M) in the five groups. Values are represented as means  $\pm$  SEM (n = 3).  $\beta$ -actin was used as a control in western blot assays. All data were analyzed by one way ANOVA plus Tukey's test. \*P < 0.05 & \*\*P < 0.01 vs. CCI group. Image collected & cropped by CiteAb from the following publication

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Western Blot: RIPK1/RIP1 Antibody - BSA Free [NBP1-77077] - Tissues B were obtained to perform western blot assays. (A) Location of collected tissues was labeled. Collected cortical tissues & hippocampus CA1 were marked by white & yellow frame, respectively. RIP1, RIP3 & MLKL in the (B) cortex & (C) hippocampus CA1 were examined via western blot from 0 h to 48 h after controlled cortical impact (CCI). Protein expression of RIP1, RIP3 & MLKL in the (D–F) cortex & (G–I) hippocampus CA1 from 0 h to 48 h after CCI was analyzed by statistical. Values are represented as means  $\pm$  SEM (n = 3–4). (J) Cleaved caspase-3 was detected in cortex & hippocampus CA1 via western blotting from 0 h to 48 h after CCI. (K,L) Protein expression of cleaved caspase-3 in the cortex & hippocampus CA1 from 0 h to 48 h after CCI was measured. Values are represented as means ± SEM (n = 4-5). (M) Cleaved caspase-8 was detected in cortex & hippocampus CA1 via western blotting from 0 h to 48 h after CCI. (N,O) Protein expression of cleaved caspase-8 in the cortex & hippocampus CA1 from 0 h to 48 h after CCI was analyzed. Values are represented as means  $\pm$  SEM (n = 4–5).  $\beta$ -actin was used as a control in western blot assays. All data were analyzed by one way ANOVA plus Tukey's test. \*P < 0.05 & \*\*P < 0.01 vs. sham group. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/31607859), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

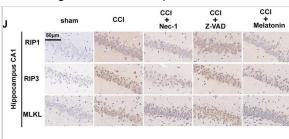


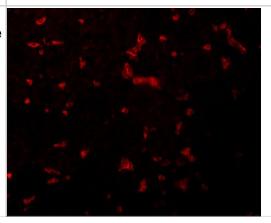


Immunohistochemistry: RIPK1/RIP1 Antibody - BSA Free [NBP1-77077] Effect of Nec-1, Z-VAD & melatonin on necroptosis. (A) At 6 h after CCI, RIP1, RIP3 & MLKL protein levels in the cortex detected by western blotting were decreased in Nec-1 & melatonin pretreatment groups, but there was no change in the Z-VAD pretreatment group. (B–D) Protein expression of RIP1, RIP3 & MLKL was analyzed by statistical. (E) Immunohistochemistry assays examined the effect of Nec-1, Z-VAD & melatonin on cortex RIP1, RIP3 & MLKL, respectively. (F) At 6 h after CCI, RIP1, RIP3 & MLKL protein levels in the hippocampus CA1 detected by western blotting were decreased in the Nec-1 & melatonin pretreatment groups, but not the Z-VAD pretreatment group. (G-I) Protein expression of RIP1, RIP3 & MLKL was analyzed by statistical. (J) Immunohistochemistry assays examined the effect of Nec-1, Z-VAD & melatonin on RIP1, RIP3 & MLKL in hippocampus CA1, respectively. (K) TdT-mediated dUTP Nick-End Labeling (TUNEL; green) & cleaved caspase-3 (red) dual immunofluorescent labeling was used & were analyzed by statistical (L,M) in the five groups. Values are represented as means ± SEM (n = 3). β-actin was used as a control in western blot assays. All data were analyzed by one way ANOVA plus Tukey's test. \*P < 0.05 & \*\*P < 0.01 vs. CCI group. Image collected & cropped by CiteAb from the following publication

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Immunocytochemistry/ Immunofluorescence: RIPK1/RIP1 Antibody - BSA Free [NBP1-77077] - Immunofluorescence of RIPK1/RIP1 in Mouse Kidney cells with RIPK1/RIP1 antibody at 20 ug/mL.





#### **Publications**

Thadathil N, Nicklas EH, Mohammed S et al. Necroptosis increases with age in the brain and contributes to agerelated neuroinflammation GeroScience 2021-10-01 [PMID: 34515928] (Immunohistochemistry-Paraffin, Mouse)

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]

Miyake, K;Ito, J;Takahashi, K;Nakabayashi, J;Brombacher, F;Shichino, S;Yoshikawa, S;Miyake, S;Karasuyama, H; Single-cell transcriptomics identifies the differentiation trajectory from inflammatory monocytes to pro-resolving macrophages in a mouse skin allergy model Nature communications 2024-02-23 [PMID: 38396021]

Miyake K, Ito J, Takahashi K et al. Single-cell transcriptomics identifies the differentiation trajectory from inflammatory monocytes to pro-resolving macrophages in skin allergy Research Square 2023-03-23 (IHC, Mouse)

Shao R, Xie Q, Pan L et al. Necrostatin-1 attenuates Caspase-1-dependent pyroptosis induced by the RIPK1/ZBP1 pathway in ventilator-induced lung injury Cytokine 2022-09-01 [PMID: 35780712]

Liu K, Huang J, Liu J et al. Induction of autophagy-dependent ferroptosis to eliminate drug-tolerant human retinoblastoma cells Cell death & disease 2022-06-02 [PMID: 35654783] (WB, Human)

Lorenzo N, Sanavia T, Rocco C et al. Necroptosis driving genes RIPK1, RIPK3, and MLKL-p are associated with intratumoral CD3+ and CD8+ T-cell density and predict prognosis in Hepatocellular Carcinoma Journal for ImmunoTherapy of Cancer 2022-01-01 [PMID: 35264437]

Kamiya M, Mizoguchi F, Kawahata K et al. Targeting necroptosis in muscle fibers ameliorates inflammatory myopathies Nature communications 2022-01-10 [PMID: 35013338] (ICC/IF, Mouse)

Pesce NA, Canovai A, Plastino F Et al. An imbalance in autophagy contributes to retinal damage in a rat model of oxygen-induced retinopathy Journal of cellular and molecular medicine 2021-10-08 [PMID: 34623024] (WB, ICC/IF, Rat)

Naseroleslami M, Niri NM, Akbarzade I et al. Simvastatin-loaded nano-niosomes confer cardioprotection against myocardial ischemia/reperfusion injury Drug delivery and translational research 2021-06-24 [PMID: 34165730]

Sharifi M, Nazarinia D, Ramezani F et al. Necroptosis and RhoA/ROCK pathways: molecular targets of Nesfatin-1 in cardioprotection against myocardial ischemia/reperfusion injury in a rat model Molecular biology reports 2021-03-23 [PMID: 33755849]

Zhao Y, Zhu X, Zhang L et al. Mesenchymal stem/stromal cells and their extracellular vesicle progeny decrease injury in post-stenotic swine kidney through different mechanisms Stem Cells Dev. 2020-07-12 [PMID: 32657229]

More publications at <a href="http://www.novusbio.com/NBP1-77077">http://www.novusbio.com/NBP1-77077</a>





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General: novus@novusbio.com

#### **Products Related to NBP1-77077**

NBP1-77077PEP RIPK1/RIP1 Antibody Blocking Peptide

HAF008 Goat anti-Rabbit IgG Secondary Antibody [HRP]

NB7160 Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]

NBP2-24891 Rabbit IgG Isotype Control

#### 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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