Anti-CRBN Antibody [PSH0-69]

HA721457

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, IP
Molecular Wt:	Predicted band size: 51 kDa
Clone number:	PSH0-69

Description: Cereblon is a protein that in humans is encoded by the CRBN gene. The gene that encodes the cereblon protein is found on the human chromosome 3, on the short arm at position p26.3 from base pair 3,190,676 to base pair 3,221,394. CRBN orthologs are highly conserved from plants to humans. Cereblon forms an E3 ubiquitin ligase complex with damaged DNA binding protein 1 (DDB1), Cullin-4A (CUL4A), and regulator of cullins 1 (ROC1). This complex ubiquitinates a number of other proteins. Through a mechanism which has not been completely elucidated, this ubiquitination results in reduced levels of fibroblast growth factor 8 (FGF8) and fibroblast growth factor 10 (FGF10). FGF8 in turn regulates a number of developmental processes, such as limb and auditory vesicle formation. The net result is that this ubiquitin ligase complex is important for limb outgrowth in embryos. In the absence of cereblon, DDB1 forms a complex with DDB2 that functions as a DNA damage-binding protein. Furthermore, cereblon and DDB2 bind to DDB1 in a competitive manner.

Immunogen: Recombinant protein within human CRBN aa 1-442 / 442.

Positive control: HEK-293 cell lysate, A375 cell lysate, A549 cell lysate, HeLa cell lysate, SH-SY5Y cell lysate, NIH/3T3 cell lysate, MCF7 cell lysate, mouse brain tissue lysate, rat testis tissue lysate, human testis tissue, human brain tissue.

Subcellular location: Cytoplasm, Nucleus, Membrane.

Database links: SwissProt: Q96SW2 Human | Q8C7D2 Mouse | Q56AP7 Rat

Recommended Dilutions:

WB	1:1,000
IHC-P	1:200
IP	1-2μg/sample

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

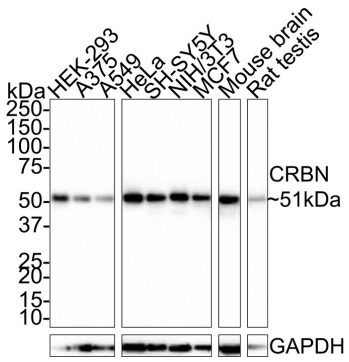

Fig1: Western blot analysis of CRBN on different lysates with Rabbit anti-CRBN antibody (HA721457) at 1/1,000 dilution.

Lane 1: HEK-293 cell lysate
Lane 2: A375 cell lysate
Lane 3: A549 cell lysate
Lane 4: HeLa cell lysate
Lane 5: SH-SY5Y cell lysate
Lane 6: NIH/3T3 cell lysate
Lane 7: MCF7 cell lysate
Lane 8: Mouse brain tissue lysate
Lane 9: Rat testis tissue lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 51 kDa
Observed band size: 51 kDa

Exposure time: 40 seconds;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA721457) at 1/1,000 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:100,000 dilution was used for 1 hour at room temperature.

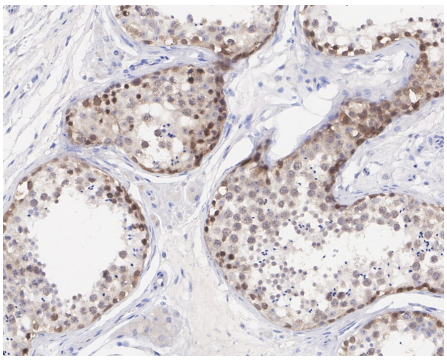

Fig2: Immunohistochemical analysis of paraffin-embedded human testis tissue with Rabbit anti-CRBN antibody (HA721457) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA721457) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

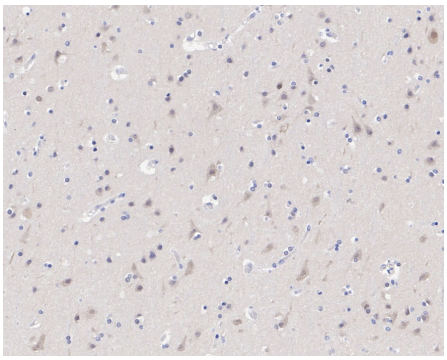

Fig3: Immunohistochemical analysis of paraffin-embedded human brain tissue with Rabbit anti-CRBN antibody (HA721457) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA721457) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

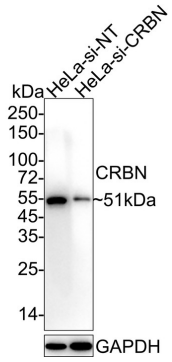

Fig4: Western blot analysis of CRBN on different lysates with Rabbit anti-CRBN antibody (HA721457) at 1/1,000 dilution.

Lane 1: HeLa-si NT cell lysate
Lane 2: HeLa-si CRBN cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 51 kDa
Observed band size: 51 kDa

Exposure time: 2 minutes;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA721457) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

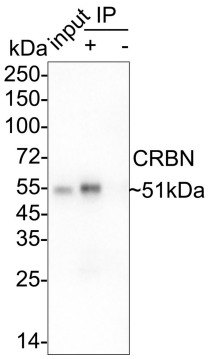

Fig5: CRBN was immunoprecipitated in 0.2mg HeLa cell lysate with HA721457 at 2 µg/25 µl agarose. Western blot was performed from the immunoprecipitate using HA721457 at 1/1,000 dilution. Anti-Rabbit IgG for IP Nano-secondary antibody (NBI01H) at 1/5,000 dilution was used for 1 hour at room temperature.

Lane 1: HeLa cell lysate (input)
Lane 2: HA721457 IP in HeLa cell lysate
Lane 3: Rabbit IgG instead of HA721457 in HeLa cell lysate

Blocking/Dilution buffer: 5% NFDM/TBST
Exposure time: 1 minute 10 seconds; ECL: K1802

Background References

1. Wang C et al. Developments of CRBN-based PROTACs as potential therapeutic agents. Eur J Med Chem. 2021 Dec
2. Yamamoto J et al. Discovery of CRBN as a target of thalidomide: a breakthrough for progress in the development of protein degraders. Chem Soc Rev. 2022 Aug