

DDB1/Cereblon (CRBN)

Cat. No. SBB-SC0116
Lot. No. 221260116



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DDB1/CRBN

Cereblon (CRBN) is the substrate recognition component of DCX (DDB1-CUL4-X-box) E3 Ubiquitin ligase complexes that mediates the ubiquitination of numerous target proteins such as ILF2 and MEIS2. Normal degradation of key regulatory proteins is required for normal limb outgrowth and expression of the fibroblast growth factor FGF8. The functional specificity of the DCX E3 ubiquitin-protein ligase complex is determined by the variable substrate recognition component recruited by DDB1.

In vivo, the endogenous substrate of CRBN MEIS2 is blocked from binding by immunomodulatory drugs (IMiDs), i.e. Thalidomide, which instead promotes the recruitment of IKZF1 or IKZF3 for degradation. DDB1 and CRBN complex has been co-expressed and purified from insect cells Sf9.

Product Information

Quantity: 25 µg

Molecular Weight: DDB1 (127 kDa), CRBN (51 kDa)

Concentration: 15 µM, 2.7 mg/mL

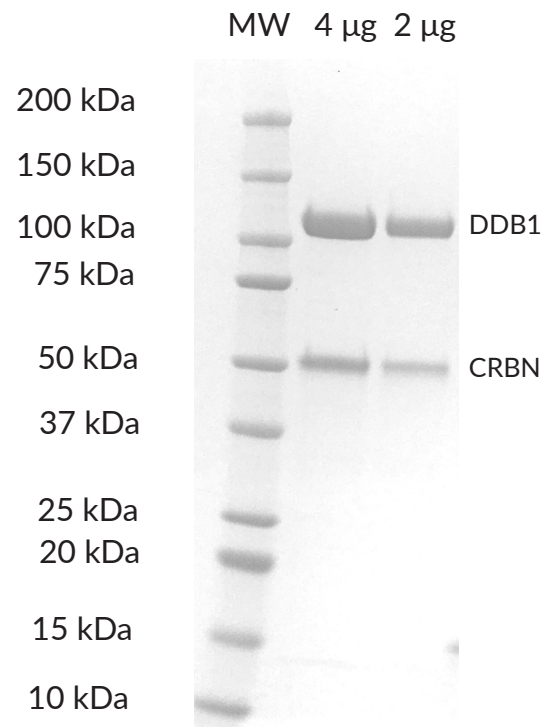
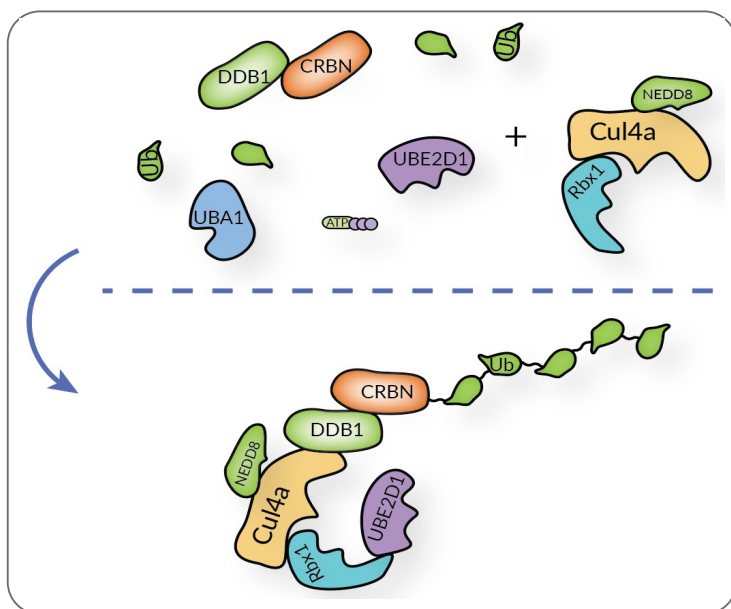
Purity: >98% by SDS-PAGE

Storage Buffer: 50 mM HEPES pH 7.5, 200 mM NaCl, 10% (v/v) Glycerol, 1 mM TCEP

Storage: -80C, Avoid multiple freeze / thaw

Usage: Working concentrations of this enzyme range from 20 - 50 nM in combination with Cul4a/Rbx1 (SBB-SC0115) for ubiquitination assays

Quality Control and Performance Data



DDB1/CRBN SDS-PAGE. From left to right, increasing amounts of DDB1/CRBN were loaded onto a 4-20% SDS-PAGE gel, stained with Coomassie brilliant blue. Purity is >98%.

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References

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- 2) Ito T., et al. "Identification of a primary target of thalidomide teratogenicity" DOI: 10.1126/science.1177319
- 3) Fischer E.S., et al. "Structure of the DDB1-CRBN E3 ubiquitin ligase in complex with thalidomide" DOI: 10.1038/nature13527
- 4) Baek K., et al. "NEDD8 nucleates a multivalent cullin-RING-UBE2D ubiquitin ligation assembly" DOI: 10.1038/s41586-020-2000-y
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