

PRODUCT INFORMATION

Cullin 1/RBX1 Complex (human, recombinant)

Item No. 45182

Overview and Properties

Synonyms: Cullin 1: CUL1, Cul-1
RBX1: E3 Ubiquitin-protein Ligase RBX1, E3 Ubiquitin-protein Transferase RBX1, Regulator of Cullins-1, RING Box Protein 1, RING Finger Protein 75, RNF75, ROC1, Protein ZYP

Source: Active recombinant human N-terminal His-Strep II-tagged cullin 1/RBX1 complex expressed in insect cells

Amino Acids: 2-776 (cullin 1) (full length)/1-108 (RBX1) (full length)

Uniprot No.: Q13616/P62877

Molecular Weight: 92.8 kDa (cullin 1)/12.3 (RBX1) kDa

Storage: -80°C (as supplied)

Stability: ≥1 year

Purity: ≥90% estimated by SDS-PAGE

Supplied in: 50 mM Tris-HCl, pH 7.5, with 200 mM sodium chloride, 20% glycerol, and 1 mM DTT

Endotoxin Testing: <1.0 EU/μg, determined by the LAL endotoxin assay

Protein

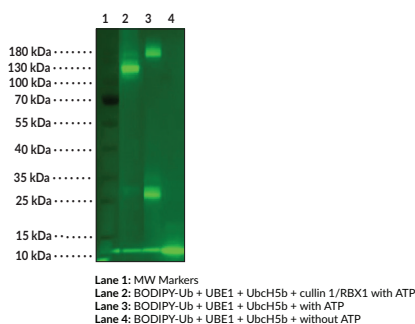
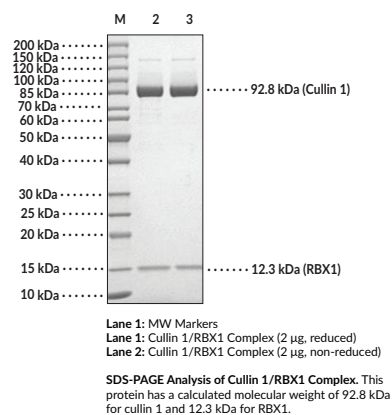
Concentration: *batch specific* mg/ml

Activity: *batch specific* U/ml

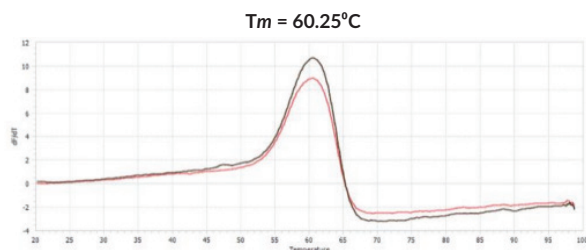
Specific Activity: *batch specific* U/mg

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Images



The ubiquitin conjugating activity of cullin 1/RBX1 was validated through its ability to catalyze the generation of polyubiquitin chains in the presence of the E1 activating enzyme UBE1, the E2 conjugating enzyme UbcH5b and BODIPY-ubiquitin. Incubation of cullin 1/RBX1 for 60 minutes at 37°C in the presence of BODIPY-ubiquitin, UBE1, UbcH5b, and ATP (Lane 2) was compared alongside two control reactions with either cullin 1/RBX1 (Lane 3) or cullin 1/RBX1 + ATP (Lane 4) excluded from the reaction. Ubiquitin conjugates were identified by the migration of the BODIPY-ubiquitin band, and these were observed only in the presence of ATP and cullin 1/RBX1.



WARNING
 THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
 This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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Description

The cullin 1 RING ligase (CRL1) complex is an E3 ubiquitin ligase complex.¹ It is composed of an F-box protein linked to S-phase kinase-associated protein 1 (SKP1) that determines substrate specificity, cullin 1, and RING box protein 1 (RBX1) or RBX2, which binds to the ubiquitin-loaded E2.² Cullin 1 acts as a scaffold that interacts with SKP1 via its N-terminal stalk domain and RBX1 or RBX2 at its C-terminal globular domain.³ NEDDylation of cullin 1 alters its conformation and increases the affinity of the complex for certain E2 enzymes.⁴ The CRL1 complex is involved in a variety of biological processes, including embryogenesis, cell cycle progression, and the DNA damage response.^{1,2,5} *CUL1*, the gene encoding cullin 1, and *RBX1* are overexpressed in a variety of cancers and associated with poor overall survival.⁶⁻⁹ Cayman's Cullin 1/RBX1 Complex (human, recombinant) can be used for enzyme activity assays.

References

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