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Product Information

Anti-Cullin 3 (C-terminal)
produced in rabbit, affinity isolated antibody

Product Number **C9745**

Product Description

Anti-Cullin 3 (C-terminal) is produced in rabbit using as immunogen a synthetic peptide corresponding to a sequence at the C-terminal of human Cullin 3 (GeneID: 8452), conjugated to KLH. The corresponding sequence is identical in mouse and rat. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Cullin 3 (C-terminal) recognizes human, mouse, and rat Cullin 3. The antibody may be used in various immunochemical techniques including immunoblotting (~80 kDa), immunoprecipitation and immuno-fluorescence. Detection of the Cullin 3 band by immunoblotting is specifically inhibited by the immunizing peptide.

Cullin 3 is a member of the cullin family of E3 ubiquitin-protein ligases.[1] Cullins function as scaffold proteins that assemble multi-subunit ubiquitin ligase complexes which are responsible for the specific recognition and targeting of substrates for ubiquitin-dependent degradation by the 26S proteasome.[2] Cullin 3 forms the BTB-Cul3-Rbx1 (BCR) ubiquitin ligase complex that contains a RING-box protein, Rbx1, and a BTB-containing protein. Rbx1 binds to the C-terminus of cullin 3 through its RING-type zinc finger domain to recruit a ubiquitin-conjugating enzyme. The BTB-containing protein binds cullin 3 at its N-terminus and functions as a cullin specific adaptor protein.[3,4] The BCR complex is catalytically inactive and becomes functional upon covalent attachment of the ubiquitin homologue neural-precursor-cell-expressed and developmentally down regulated 8 (Nedd8) to a specific lysine residue near the C-terminus of cullin 3.[5] The BCR complex regulates the degradation of several proteins, including cyclin E, the meiotic spindle-formation factor Mei-1, the transcription factor Nrf2, the Ci/Gli transcription factor, and the Dishevelled protein in the Wnt-b-catenin pathway.[1,5]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: ~1.0 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots at –20 °C. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody concentration of 2-5 μg/mL is recommended using a whole extract of human Jurkat cells.

Immunoprecipitation: a working antibody amount of 1-2 μg is recommended using a lysate of rat brain.

Immunofluorescence: a working antibody concentration of 2-5 μg/mL is recommended using mouse 3T3 cells.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

1. Singer, J.D. et al., *Genes Dev*., **13**, 2375-2387 (1999).
2. Petroski, M.D., and Deshaies R.J., *Nat. Rev. Mol. Cell Biol.*, **6**, 9-20 (2005).
3. Pintard, L. et al., *Nature*, **425**, 311-316 (2003).
4. Pintard, L. et al., *EMBO J.*, **23**, 1681-1687 (2004).
5. Wimuttisuk, W., and Singer, J.D., *Mol. Biol. Cell*, **18**, 899-909 (2007).

VS,ST,TD,KAA,PHC,MAM 03/19-1