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Product Information

Anti-Cullin 3 antibody ,Mouse monoclonal
clone CUL3-9, purified from hybridoma cell culture

Product Number **SAB4200180**

Product Description

Monoclonal Anti-Cullin 3 (mouse IgG1 isotype) is derived from the hybridoma CUL3-9 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with a synthetic peptide corresponding to a sequence of human Cullin 3 (GeneID: 8452), conjugated to KLH. The corresponding sequence is identical in mouse and rat. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2. The antibody is purified from culture supernatant of hybridoma cells grown in a bioreactor.

Monoclonal Anti-Cullin 3 recognizes human, mouse, and rat Cullin 3 (not tested in other species). The antibody may be used in several immunochemical techniques including immunoblotting (80 kDa) and immunoprecipitation. 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 an 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 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 factors Nrf2 and Ci/Gli transcription factor, and the Dishevelled protein in the Wnt-β-catenin pathway.[1,5]

Reagent

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

Antibody concentration: ~1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses.

Storage/Stability

Store at –20 °C. For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze at –20 °C in working aliquots. Repeated freezing and thawing, or storage in “frost-free” freezers, 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 0.5-1.0 μg/mL is recommended using whole extracts of human Jurkat cells or mouse brain.

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,RC,KAA,PHC,MAM 06/20-1