Technical Data Sheet

Purified Mouse Anti- CUL-2

Product Information

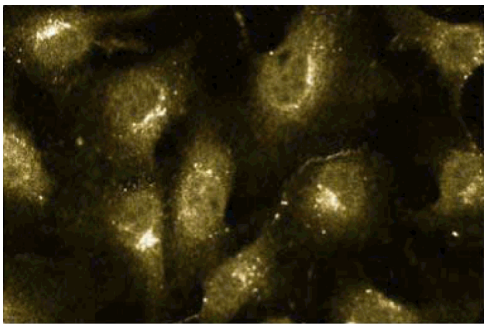
Material Number:	**610778**
Alternate Name:	Cullin-2
Size:	50 µg
Concentration:	250 µg/ml
Clone:	4/CUL-2
Immunogen:	Human CUL-2 aa. 18-182
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human Tested in Development: Mouse, Rat, Dog
Target MW:	76 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

The cullins are a family of proteins that are integral to cell cycle regulation. Members of this family include human Cul-2, *C.elegans* Ce-Cul-1, and S. cerevisiae Cdc53. Proper control of cell cycle progression is essential for the prevention of tumorigenesis. Mutant forms of both Ce-Cul-1 and Cdc53 have been implicated in the oncogenic process. Abnormal nuclear localization of Cul-2 is seen in a rare hereditary condition known as VHL (von Hippel-Lindau) syndrome. Patients with VHL syndrome possess a mutant VHL gene and develop cancers such as retinal anginomas, CNS hemangioblastomas, and renal cell carcinomas. In normal cells, the VHL protein competes with subunit A of elongin, a transcription elongation factor, for binding to subunits B and C. The formation of the VHL-B-C complex inhibits elongation. Additional data indicates that this complex associates with CUL-2 and promotes CUL-2 nuclear translocation. In cells with mutated VHL, transcriptional elongation is not efficiently curtailed and CUL-2 is not properly localized in the nucleus. Therefore, CUL-2 mediates VHL function, suggesting CUL-2 may be a candidate human tumor suppressor.

This antibody is routinely tested by western blot analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.

Western blot analysis of CUL-2 on a Jurkat cell lysate (Human T-cell leukemia; ATCC TIB-152). *Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of the mouse anti-CUL-2 antibody.*



Immunofluorescence staining of human endothelial cells.

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Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20° C.

Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development
Immunoprecipitation	Not Recommended
Immunohistochemistry	Not Recommended

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml

Suggested Companion Products

Catalog Number	Name	Size	Clone
611451	Jurkat Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Pause A, Lee S, Worrell RA, et al. The von Hippel-Lindau tumor-suppressor gene product forms a stable complex with human CUL-2, a member of the Cdc53 family of proteins. *Proc Natl Acad Sci U S A.* 1997; 94(6):2156-2161.(Biology)

Saitoh H, Pizzi MD, Wang J. Perturbation of SUMOlation enzyme Ubc9 by distinct domain within nucleoporin RanBP2/Nup358. *J Biol Chem.* 2002; 277(7):4755-4763.(Biology: Immunofluorescence)