Technical Data Sheet

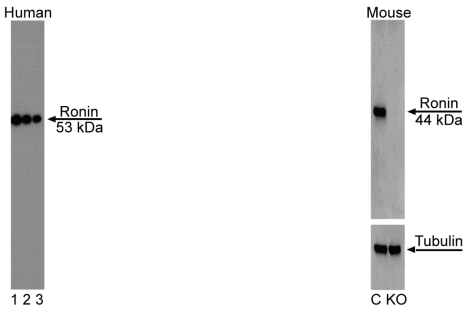
Purified Mouse anti-Ronin/THAP11

Product Information

Material Number:	**562548**
Alternate Name:	Ronin, THAP11
Entrez Gene ID:	57215
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	P56-507
Immunogen:	Human Ronin/THAP11 Recombinant Protein
Isotype:	Mouse IgG2b, κ
Reactivity:	QC Tested: Human, Tested in Development: Mouse
Target MW:	53 kDa for human, 44 kDa for mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

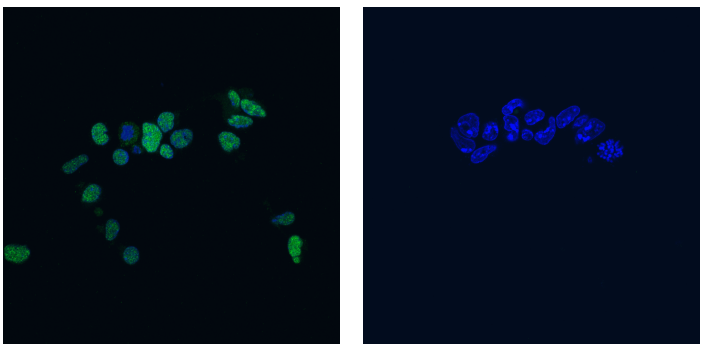
Description

Thanatos-associated proteins (THAPs) are characterized by the THAP domain, which is a conserved Drosophila P element transposase DNA-binding domain. THAPs are DNA-binding factors involved in cell proliferation, apoptosis, cell cycle and transcriptional regulation. THAP11 is an essential factor in embryogenesis and ES cell pluripotency and binds directly to host cell factor 1 (HCF-1), a key regulator of transcriptional control. THAP11 has been designated as Ronin, named for a masterless Japanese samurai because of its lack of any apparent relationship to Nanog, Oct4 and Sox2—the master regulators of pluripotency. Ronin/THAP11 binds to the c-Myc promoter and down-regulates c-Myc expression. Recently, it was reported that Bcr-Abl inhibited the expression of THAP11 in Chronic myelogenous leukemia (CML) cells and promoted CML cell proliferation by the aberrant induction of c-Myc expression.



LEFT BLOT:
***Western Blot analysis of Ronin in human embryonic stem (hES) cells**. Lysate from H9 hES cells (WiCell, Madison, WI) was probed with Purified Mouse anti-Ronin/THAP11 monoclonal antibody at titrations of 2.0 (lane 1), 1.0 (lane 2), and 0.5 µg/ml (lane 3). Ronin is identified as a band of ~53 kDa.*

RIGHT BLOT:
***Western blot analysis of Ronin in mouse embryonic (mES) stem cells and Ronin-knockout mES cells.** Conditional Ronin-knockout mES cells were generated using a tamoxifen inducible Ert2-Cre system and tested by Western Blot. Equal amounts (20 µg) of control mES (lane C) and Ronin-knockout mES cells (lane KO) were probed with Purified Mouse anti-Ronin/THAP11 antibody at 1 µg/ml. The presence of Ronin/THAP11 is demonstrated by the approximately 44-kDa band in the control cells and its absence in the knockout mES cells. Purified mouse anti-α Tubulin was used as a gel loading control. Data generated by Dr. Thomas Zwaka's Lab, Baylor College of Medicine.*



BIOIMAGING:
***Immunofluorescent staining of Ronin in mouse embryonic stem (mES) cells and Ronin-knockout mES cells.** Control (left image) and Ronin-knockout (right image) mES cells were fixed and permeabilized with BD Cytofix/Cytoperm, and stained with Purified Mouse anti-Ronin monoclonal antibody (pseudo-colored green) at 0.6 µg/ml. The second-step reagent was Alexa Fluor® 488 Anti-Mouse Ig (Life Technologies), and counter staining was with DAPI (pseudo-colored blue). The image was captured on a Nikon A1Rs confocal laser scanning microscope with a magnification of 60x. Data generated by Dr. Thomas Zwaka's Lab, Baylor College of Medicine.*

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Preparation and Storage

Store undiluted at 4°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Application Notes

Application

Western blot	Routinely Tested
Intracellular staining (flow cytometry)	Tested During Development
Bioimaging	Tested During Development
Immunofluorescence	Tested During Development

Recommended Assay Procedure:

For Bioimaging please see the protocol at http://www.bdbiosciences.com/support/resources/protocols/ceritifed_reagents.jsp.

Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
353219	BD Falcon™ 96-well Imaging Plate	NA	(none)
561908	Hoechst 33342 Solution	1.0 mg	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Sodium azide is a reversible inhibitor of oxidative metabolism; therefore, antibody preparations containing this preservative agent must not be used in cell cultures nor injected into animals. Sodium azide may be removed by washing stained cells or plate-bound antibody or dialyzing soluble antibody in sodium azide-free buffer. Since endotoxin may also affect the results of functional studies, we recommend the NA/LE (No Azide/Low Endotoxin) antibody format, if available, for in vitro and in vivo use.
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. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Dejosez M, Krumenacker JS, Zitur LJ, et al. Ronin is essential for embryogenesis and the pluripotency of mouse embryonic stem cells. *Cell.* 2008; 133(7):1162-1174. (Biology)

Dejosez M, Levine SS, Frampton GM, et al. Ronin/Hcf-1 binds to a hyperconserved enhancer element and regulates genes involved in the growth of embryonic stem cells. *Genes Dev.* 2010; 24(14):1479-1484. (Biology)

Nakamura S, Yokota D, Tan L, et al. Down-regulation of Thanatos-associated protein 11 by BCR-ABL promotes CML cell proliferation through c-Myc expression. *Int J Cancer.* 2012; 130(5):1046-1059. (Biology)

Zhu CY, Li CY, Li Y, et al. Cell growth suppression by thanatos-associated protein 11(THAP11) is mediated by transcriptional downregulation of c-Myc. *Cell Death Differ.* 2009; 16(3):395-405. (Biology)

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