Purified anti-TIF1β (KAP-1, TRIM28) Antibody

Catalog# / Size	941301 / 25 µg 941302 / 100 µg
Clone	W19027A
Regulatory Status	RUO
Other Names	Tripartite Motif Containing 28; RING Finger Protein 96; Transcription Intermediary Factor1-β, KRAB [Kruppel-Associated Box Domain]-Associated Protein 1; KRAB-Associated Protein 1
Isotype	Rat IgG2a, κ
Description	TIFβ (transcription intermediary factor 1-beta) is an 89 kD member of the tripartite motif family. This protein contains three zinc binding domains, a RING domain, a B-box type 1 and type 2 domain, and a coiled-coil region. TIFβ is found in the nucleus and associates with specific chromatin regions. This protein forms a complex with KRAB-domain transcription factors and recruits SETDB1 to histone 3 to increase KRAB-mediated transcriptional repression. TIF1β has been reported to interact with SETDB1 and CBX3 proteins. Studies using knockout mice reveal the important function of TIF1β in regulating genomic imprinting, T cell activation, and T cell tolerance.

Product Details

Verified Reactivity	Human, Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Full-length recombinant mouse TIF1β protein
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Preparation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/mL
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	WB - Quality tested IP, ICC - Verified
Recommended Usage	Each lot of this antibody is quality control tested by western blotting. For western blotting, the suggested use of this reagent is 1.0 µg/mL. For immunocytochemistry, a concentration range of 1.0 - 5.0 µg/mL is recommended. For immunoprecipitation, the suggested use of this reagent is 2.5 µg/test. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	- BioLegend offers two monoclonal antibodies, clones 20A1 and W19027A that bind TIF1β (KAP-1, TRIM28). • 20A1 is a mouse IgG1, κ isotype; W19027A is a rat IgG2a, κ isotype • Both clones detect human and mouse TIF1β by western blot; 20A1 binds TIF1β with a higher affinity than W19027A for this application, but also shows a higher background • Both clones are validated for immunocytochemistry on human cells • W19027A is validated for immunoprecipitation, 20A1 has not been tested for this application - Clone W19027A was tested for immunocytochemistry using 4% PFA-fixed HeLa cells permeabilized with either Triton X-100 or methanol. Both methods were compatible with TIF1β staining.
RRID	AB_2888901 (BioLegend Cat. No. 941301) AB_2888901 (BioLegend Cat. No. 941302)

Antigen Details

Structure	TIF1β is an 835 amino acid protein with a predicted molecular weight of 89 kD.
Distribution	Ubiquitously expressed/Nucleus
Function	Chromatin remodeling
Antigen References	1. Ryan RF, *et al.* 1999. *Mol. Cell. Biol.* 19:4366. 2. Schultz DC, *et al.* 2002. *Genes Dev.* 16:919. 3. Moosmann PR, *et al.* 1996. *Nucleic Acids Res.* 24:4859. 4. Friedman JR, *et al.* 1996. *Genes Dev.* 10:2067. 5. Messerschmidt DM, *et al.* 2012. *Science* 335:1499. 6. Chikuma S, *et al.* 2012. *Nat. Immunol.* 13:596.
Gene ID	10155

Related Protocols

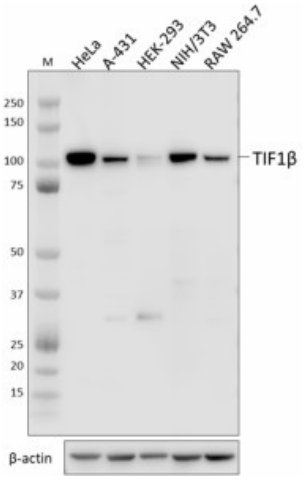
Western Blotting Protocol

Immunoprecipitation Protocol

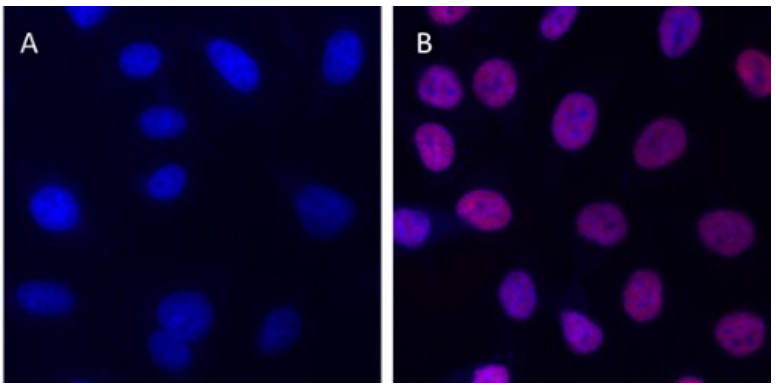
Other Formats

Purified anti-TIF1β (KAP-1, TRIM28) Antibody

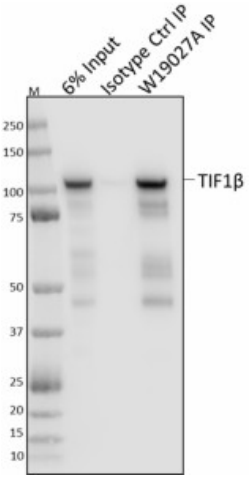
Product Data



Whole cell extracts (15 µg total protein) from the indicated cell lines were resolved by 4-12% Bis-Tris gel electrophoresis, transferred to a PVDF membrane, and probed with 1.0 µg/mL (1:500 dilution) purified anti-TIF1β (KAP-1, TRIM28) antibody (clone W19027A) overnight at 4°C. Proteins were visualized by chemiluminescence detection using HRP goat anti-rat IgG antibody (Cat. No. 405405) at a 1:3000 dilution. Direct-Blot™ HRP anti-β-actin antibody (Cat. No. 664804) was used as a loading control at a 1:25000 dilution (lower). Lane M: Molecular weight marker.



HeLa cells were fixed with 4% paraformaldehyde for 10 minutes, permeabilized with methanol for 6 minutes, and blocked with 5% FBS for 60 minutes. Cells were then intracellularly stained with 5.0 µg (1:100 dilution) purified rat IgG2a, κ isotype ctrl antibody (panel A) (Cat. No. 400501) or purified anti-TIF1β (KAP-1, TRIM28) antibody (clone W19027A) (panel B) overnight at 4°C followed by incubation with Alexa Fluor® 594 goat anti-rat IgG antibody (Cat. No. 405422) at 2.0 µg/mL. Nuclei were counterstained with DAPI and the image was captured with a 60X objective.



Whole cell extracts (250 µg total protein) prepared from HeLa cells were immunoprecipitated overnight with 2.5 µg purified rat IgG2a, κ isotype ctrl antibody (Cat. No. 400501) or purified anti-TIF1β (KAP-1, TRIM28) antibody (clone W19027A). The resulting IP fractions and whole cell extract input (6%) were resolved by 4-12% Bis-Tris gel electrophoresis, transferred to a PVDF membrane and probed with purified anti-TIF1β (KAP-1, TRIM28) antibody (clone 20A1) (Cat. No. 619301). Lane M: Molecular weight marker.

8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587