PRODUCT INFORMATION

TRIM33 PHD and bromodomain (human, recombinant)

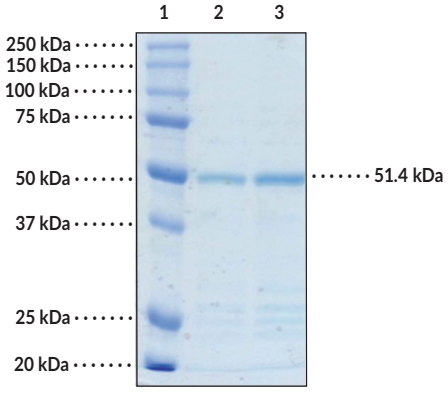
Item No. 14661

Overview and Properties

Synonyms:	Ectodermin Homolog, E3 Ubiquitin-protein Ligase TRIM33, RFG7, TIF1-γ, Transcriptional Intermediary Factor 1-γ, Tripartite Motif Containing 33
Source:	Recombinant N-terminal GST-tagged protein expressed in *E. coli*
Amino Acids:	882-1,087 (N- and C-terminal truncation)
Molecular Weight:	51.4 kDa
Storage:	-80°C (as supplied)
Stability:	≥6 months
Purity:	***batch specific*** (≥80% estimated by SDS-PAGE)
Supplied in:	50 mM Tris, pH 8.0, with 150 mM sodium chloride and 20% glycerol
Protein Concentration:	***batch specific*** mg/ml

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers
Lane 2: TRIM33 PHD and bromodomain (2 µg)
Lane 3: TRIM33 PHD and bromodomain (4 µg)

Representative gel image shown; actual purity may vary between each batch.

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Description

TRIM33 (TIF1-γ) is a multi-domain regulator of transcription. It contains a RING domain with E3 ubiquitin ligase activity, two B-boxes, a coiled-coil domain, a PHD domain, and a bromodomain. TRIM33 is necessary for embryogenesis, and mice homozygous for TRIM33 knock-out do not survive to embryonic day 9.5.[1] TRIM33 is targeted to DNA by its tandem PHD and bromodomain which bind histone 3 at trimethylated lysine 9 (H3K9me3) and acetylated lysine 18 (H3K18ac), respectively.[2] TRIM33 represses TGFβ signaling by sequestering Smad2/3, and by ubiquitinating Smad4.[3-5] The TRIM33-Smad2/3 complex upregulates transcription at sites of H3K9 trimethylation. During the DNA damage response, TRIM33 targets Amplified in Liver Cancer 1 (ALC1) to sites of DNA damage.[6] Deletion of either the PHD or bromodomain of TRIM33 prevents localization of TRIM33 to sites of DNA damage.[6] This protein product contains the PHD and bromodomains of TRIM33.

References

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3. Fattet, T., Ay, A., Bonneau, B., *et al. J. Cell Sci.* **126(16)**, 3713-3723 (2013).
4. Dupont, S., Mamidi, A., Cordenonsi, M., *et al. Cell* **136(1)**, 123-135 (2009).
5. Agricola, E., Randall, R.A., Gaarenstroom, T., *et al. Mol. Cell* **43(1)**, 85-96 (2011).
6. Kulkarni, A., Oza, J., Yao, M., *et al. J. Biol. Chem.* (2013).

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