

Recombinant TRIM33 (959-1069) protein

Catalog No: 31367, 31767

Lot No: 22417003

Expressed In: *E. coli*

Quantity: 100, 1000 µg

Concentration: 0.5 µg/µl

Source: Human

Buffer Contents: Recombinant TRIM33 (959-1069) protein expressed in *E. coli* and supplied at a concentration of 0.5 µg/µl in 25mM Tris-HCl 8.0, 300mM NaCl, 5% glycerol.

Background: Tripartite motif-containing 33 (TRIM33) protein, also known as **TIF1γ**, is a member of the transcriptional intermediary factor 1 (TIF1) family that control transcription and chromatin remodeling through their interaction with transcription factors. The family includes TRIM24 (TIF1α), TRIM28 (TIF1β) and TRIM33 (TIF1γ) that share a characteristic domain structure comprised of multiple histone-binding domains, an N-terminal TRIM region (containing a RING domain, B box type 1 and type 2 domains, and a coiled-coil region), and a C-terminal bromodomain and PHD finger. Bromodomains function as 'readers' of epigenetic histone marks and regulate chromatin structure and gene expression by linking associated proteins to the recognized acetylated nucleosomal targets. TRIM33 is an E3 ubiquitin protein ligase that promotes SMAD4 ubiquitination, nuclear exclusion and degradation via the ubiquitin proteasome pathway. TRIM33 does not affect SMAD4 levels but rather acts as an inhibitor of the SMAD4-dependent TGFβ/BMP signaling cascade by monoubiquitinating SMAD4 and hampering its ability to form a stable complex with activated SMAD2/3. TRIM33 may also act as a transcriptional corepressor. It has also been shown to associate with SMAD2 and SMAD3 and stimulate differentiation of hematopoietic stem cells. Additionally, TRIM33 associates with TRIM24 and plays a role in the control of cell proliferation.

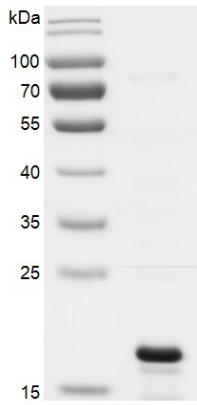
Protein Details: The peptide corresponding to amino acids 959 - 1059 that contains the bromodomain sequences of TRIM33 (accession number NP_056990.3) was expressed in *E. coli* and contains an N-terminal His-Tag and C-terminal FLAG-Tag with an observed molecular weight of 17.7 kDa. The recombinant protein is >90% pure by SDS-PAGE.

Application Notes: Recombinant TRIM33 (959-1069) is suitable for use in binding assays, inhibitor screening, and selectivity profiling.

Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is guaranteed for 6 months from date of receipt.

This product is for research use only and is not for use in diagnostic procedures.

TRIM33 (959-1069)



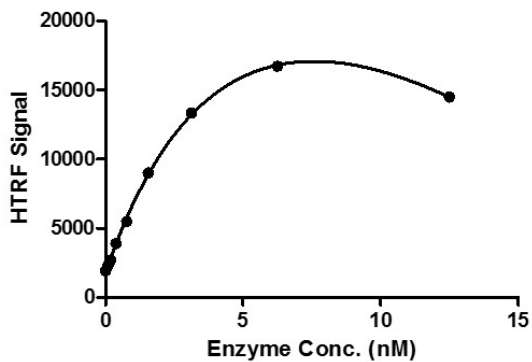
Recombinant TRIM33 (959-1069) protein gel.

TRIM33 (959-1069) protein was run on a 12.5% SDS-PAGE gel and stained with Coomassie Blue.

MW: 17.7 kDa

Purity: >90%

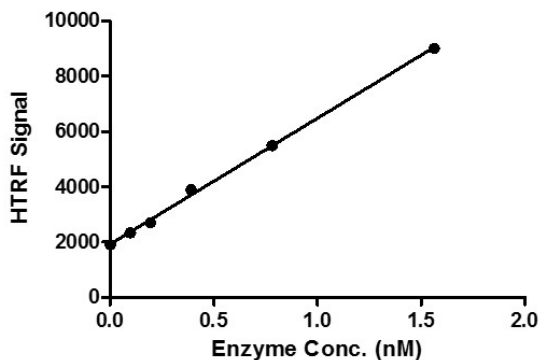
TRIM33 (959-1069) Titration



Recombinant TRIM33 (959-1069) protein HTRF activity assay.

1 μ M H4K5/8/12/16 (ac4) peptide was incubated with different concentrations of TRIM33 (959- 1069) protein in 10 μ l reaction system containing 50 mM HEPES-NaOH pH 7.5, 0.1% BSA for 1 hour, then 10 μ l FLAG antibody and SA-XL665 mixture (1:100 dilution in the same buffer) was added to each reaction system and incubated for 30 min. All the operations and reactions were performed at room temperature. HTRF assay was used for detection.

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