

# PRODUCT INFORMATION



## TIP60 (human, recombinant)

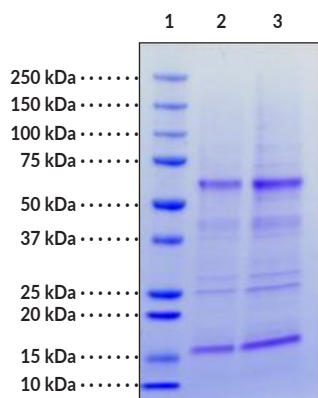
Item No. 10783

### Overview and Properties

<b>Synonyms:</b>	cPLA(2) Interacting Protein, Esa1, Histone acetyltransferase KAT5, HIV-1 Tat Interacting Protein 60 kDa, Hs.6364, HTATIP, KAT5, PLIP
<b>Source:</b>	Recombinant N-terminal hexahistidine-tagged protein expressed in Sf21 cells
<b>Amino acids:</b>	2-513 (Full length, Isoform 2)
<b>Uniprot No.:</b>	Q92993
<b>Molecular Weight:</b>	60.3 kDa
<b>Storage:</b>	-80°C (as supplied); avoid freeze/thaw cycles by aliquoting protein
<b>Stability:</b>	≥6 months
<b>Purity:</b>	≥50% (estimated by SDS-PAGE)
<b>Supplied in:</b>	50 mM Tris-HCl, pH 7.5, with 300 mM sodium chloride and 10% glycerol
<b>Protein Concentration:</b>	<i>batch specific</i> mg/ml
<b>Activity:</b>	<i>batch specific</i> U/ml
<b>Specific Activity:</b>	<i>batch specific</i> U/mg
<b>Unit Definition:</b>	One unit is defined as the amount of enzyme required to produce 1 pmole of acetylated peptide per minute at 37°C in 100 mM HEPES, pH 7.5, 0.8% Triton X-100 containing 100 μM histone H4 peptide (amino acids 1-21, Item No. 10854), and acetyl-CoA. Activity was determined using Cayman's HAT Inhibitor Screening Assay Kit (Item No. 10006515).

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

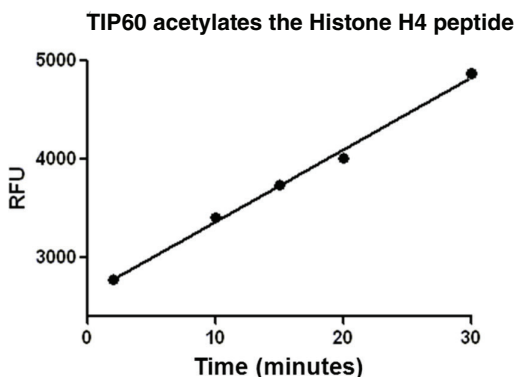
### Images



Lane 1: MW Markers  
Lane 2: TIP60 (2 μg)  
Lane 3: TIP60 (4 μg)

SDS-PAGE Analysis of TIP60.

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



#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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## Description

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TIP60 is a member of the MYST family of lysine acetyl transferases. It has been shown to acetylate histones, p53, and the Ataxia Telangiectasia Mutant (ATM) protein kinase.<sup>1</sup> As a component of the TIP60-p400 complex, TIP60 acetylates transcription repressors in order to inhibit gene transcription.<sup>2</sup> In complexes without p400, TIP60 is part of a chromatin remodeling complex which plays an important role in double-stranded DNA break repair. Acetylation of histone  $\gamma$ H2AX allows formation of the  $\gamma$ H2AX repair foci, and acetylation of ATM is one of the early steps in double-stranded DNA break repair. Furthermore, TIP60 is bound by the cytoplasmic tail of  $\beta$ -amyloid precursor protein which drives gene transcription, apoptosis, and potentially a role in Alzheimer's disease pathogenesis.<sup>3</sup>

## References

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1. Sun, Y., Jiang, X., and Price, B.D. Tip60: Connecting chromatin to DNA damage signaling. *Cell Cycle* **9(5)**, 930-936 (2010).
2. Fazio, T.G., Hurr, J.T., and Panning, B. Chromatin regulation Tip(60)s the balance in embryonic stem cell self-renewal. *Cell Cycle* **7(21)**, 3302-3306 (2008).
3. Wu, J., Wang, J., Li, M., et al. Small molecule inhibitors of histone acetyltransferase Tip60. *Bioorg. Chem.* **39(1)**, 53-58 (2011).

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