

# PRODUCT INFORMATION

## ATAD2 bromodomain (human recombinant)

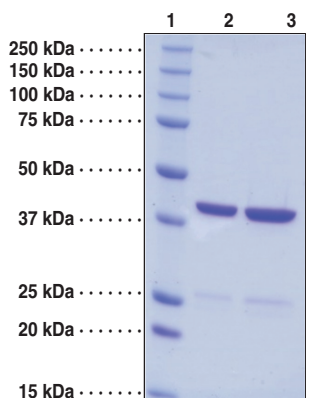
Item No. 14490

### Overview and Properties

**Synonyms:** ANCCA, ATPase Family AAA Domain-containing Protein 2  
**Source:** Recombinant N-terminal GST-tagged protein expressed in *E. coli*  
**Amino Acids:** 981-1,108 (partial protein)  
**Uniprot No.:** Q6PL18  
**Molecular Weight:** 43.1 kDa  
**Storage:** -80°C (as supplied)  
**Stability:** ≥1 year  
**Purity:** **batch specific** (≥90% estimated by SDS-PAGE)  
**Supplied in:** 50 mM Tris, pH 8.0, with 150 mM sodium chloride and 20% glycerol

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

### Image



Lane 1: MW Markers  
 Lane 2: ATAD2 (2 µg)  
 Lane 3: ATAD2 (4 µg)

**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**  
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## Description

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The acetylation of histone lysine residues plays a crucial role in the epigenetic regulation of gene transcription. Acetylated lysine residues are recognized by a small protein domain known as a bromodomain.<sup>1</sup> These domains function in linking protein complexes to acetylated nucleosomes, thereby controlling chromatin structure and gene expression. Thus, bromodomains serve as “readers” of histone acetylation marks regulating the transcription of target promoters.<sup>2</sup> ATAD2 is an AAA+ ATPase-containing nuclear transcriptional coactivator for the estrogen and androgen receptors.<sup>3,4</sup> ATAD2 is highly expressed in several types of tumors and has been proposed to link the E2F and MYC signaling pathways. Binding to the MYC oncogene stimulates its transcriptional activity, leading to the development of aggressive cancers with poor prognosis.<sup>5</sup> ATAD2 is important for the assembly of chromatin modifying complexes and its bromodomain associates with acetylated lysine 14 on histone H3 to regulate the genes required for cell cycle progression.<sup>3,6</sup>

## References

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2. Muller, S., Filippakopoulos, P., and Knapp, S. Bromodomains as therapeutic targets. *Expert Rev. Mol. Med.* **13**, 1-21 (2011).
3. Kalashnikova, E.V., Revenko, A.S., Gemo, A.T., *et al.* ANCCA/ATAD2 overexpression identifies breast cancer patients with poor prognosis, acting to drive proliferation and survival of triple-negative cells through control of B-Myb and EZH2. *Cancer Research* **70(22)**, 9402-9412 (2010).
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5. Ciró, M., Prosperini, E., Quarto, M., *et al.* ATAD2 is a novel cofactor for MYC, overexpressed and amplified in aggressive tumors. *Cancer Research* **69**, 8491-8498 (2009).
6. Revenko, A.S., Kalashnikova, E.V., Gemo, A.T., *et al.* Chromatin loading of E2F-MLL complex by cancer-associated coregulator ANCCA via reading a specific histone mark. *Mol. Cell. Biol.* **30(22)**, 5260-5272 (2010).

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