

Recombinant ATAD2 (981-1108) protein

Catalog No: 31376, 31876**Expressed In:** *E. coli***Quantity:** 100, 1000 µg**Concentration:** 0.8 µg/µl**Source:** Human

Buffer Contents: Recombinant ATAD2 (981-1108) protein was expressed in *E. coli* cells at a concentration of 0.8 µg/µl in 25 mM Tris-HCl pH 8.0, 500 mM NaCl, 20% glycerol.

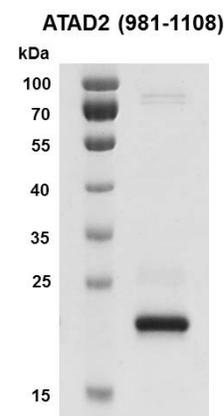
Background: ATPase family AAA domain-containing 2 (ATAD2) protein belongs to the AAA protein family which includes a diverse set of proteins with the capacity to couple ATPase-derived chemical energy to mechanical energy resulting in remodeling or translocation of the targeted macromolecular substrate. These proteins are involved in a number of cellular processes ranging from protein degradation and DNA replication to membrane fusion and the movement of microtubule motors. ATAD2 is thought to act as a transcriptional coactivator of the nuclear receptor ESR1 that is required to induce the expression of a subset of estradiol target genes, such as CCND1, MYC and E2F1. Furthermore, ATAD2 may also play a role in the recruitment or occupancy of CREBBP at some ESR1 target gene promoters. In addition, there is evidence that ATAD2 may be required for histone hyperacetylation. Human ATAD2 consists of two AAA+ domains and a bromodomain. Bromodomains recognize acetylated histone lysine residues and function as 'readers' of these epigenetic histone marks to regulate chromatin structure and gene expression by linking associated proteins to the recognized acetylated nucleosomal targets. The ATAD2 bromodomain specifically interacts with H4K5ac and may contribute to cancer cell proliferation since it has been associated with poor prognosis in breast and testicular cancer.

Protein Details: The peptide corresponding to amino acids 981 - 1108 that contains the bromodomain sequences of ATAD2 (accession number NP_054828.2) was expressed in *E. coli* and contains an N-terminal His tag and C-terminal FLAG tag with an observed molecular weight of 21.3 kDa. It shows binding specificity for acetylated H3K14. The recombinant protein is >90% pure by SDS-PAGE.

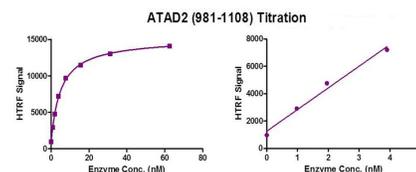
Application Notes: Recombinant ATAD2 (981-1108) is suitable for use in binding assays, inhibitor screening, and selectivity profiling.

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.

**Recombinant ATAD2 (981-1108) protein gel.**

ATAD2 (981-1108) protein was run on a 12.5% SDS-PAGE gel and stained with Coomassie Blue.

**Recombinant ATAD2 (981-1108) HTRF activity assay.**

3 µM histone peptide H4K5/8/12/16 (4Ac) was incubated with ATAD2 (981-1108) in reaction buffer including 50 mM HEPES-NaOH pH 7.5 and 0.1% BSA for 1 hour at room temperature. Anti-FLAG antibody was used to detect reaction products.