Revision 1

Store at -20C

#78568

# ATAD2 (E8Y2K) Rabbit mAb

Cell Signaling TECHNOLOGY®

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**For Research Use Only. Not for Use in Diagnostic Procedures.**

| Applications: | Reactivity: | Sensitivity: | MW (kDa): | Source/Isotype: | UniProt ID: | Entrez-Gene Id: |
|---|---|---|---|---|---|---|
| W, IHC-P | H | Endogenous | 180 | Rabbit IgG | #Q6PL18 | 29028 |

## Product Usage Information

| Application | Dilution |
|---|---|
| Western Blotting | 1:1000 |
| Immunohistochemistry (Paraffin) | 1:200 - 1:800 |

## Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. *Do not aliquot the antibody.*

## Specificity/Sensitivity

ATAD2 (E8Y2K) Rabbit mAb recognizes endogenous levels of total ATAD2 protein. Note: Non-specific non-nuclear staining was observed in brain in immunohistochemistry testing.

## Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu910 of human ATAD2 protein.

## Background

ATPase family AAA domain containing protein 2 (ATAD2) is an oncogenic protein that was originally identified as a coactivator for estrogen receptor (ESR1), and later identified as a coactivator for other transcription factors including c-Myc and E2F1, E2F2, and E2F3 proteins (1-4). ATAD2 is highly expressed and associated with poor prognosis in many types of cancer, including breast, uterine, colon, ovarian, stomach, non-small cell lung carcinoma, osteosarcoma, and cervical cancer (1,5-14). In cancer cells, overexpressed ATAD2 interacts with transcription factors and chromatin modifier proteins to induce the expression of genes that promote cell proliferation and inhibit apoptosis, ultimately promoting tumor growth (15,16). Indeed, knockdown of ATAD2 in pancreatic cancer cell lines has been shown to promote apoptosis, limit cell migration and invasion, and inhibit anchorage-independent growth (17). ATAD2 is a member of the ATPases associated with various cellular activities (AAA) family of proteins and contains a functional AAA domain in its central region, as well as a bromodomain near the C-terminus. The bromodomain binds to acetylated lysine residues on histone proteins, targeting ATAD2 protein to areas of active transcription, where it modulates chromatin structure and recruits additional transcription factors (18,19). Current efforts are underway to better characterize and develop inhibitors to the ATAD2 bromodomain for the treatment of various cancers (16,20-23).

## Background References

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## Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

## Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

## Applications Key

**W:** Western Blotting **IHC-P:** Immunohistochemistry (Paraffin)

## Cross-Reactivity Key

**H:** Human

## Trademarks and Patents



## Limited Uses