Revision 4

Store at -20C

#13268

ATPIF1 (D6P1Q) XP® 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, IP, IHC-P, IF-IC	H Mk	Endogenous	12	Rabbit IgG	#Q9UII2	93974

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100
Immunohistochemistry (Paraffin)	1:1600
Immunofluorescence (Immunocytochemistry)	1:3200

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.

For a carrier free (BSA and azide free) version of this product see product #99023.

Specificity/Sensitivity

ATPIF1 (D6P1Q) XP® Rabbit mAb recognizes endogenous levels of total ATPIF1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala46 of human ATPIF1 protein.

Background

The ATPase inhibitor factor 1 (ATPIF1) gene encodes a mitochondrial ATPase inhibitor that limits ATP depletion when mitochondrial respiration is impaired (1). ATPIF1 becomes activated following a drop in pH, binding to β-F1-ATPase, thereby inhibiting the hydrolase activity of the H^+-ATP synthase (1,2). In addition to its role as an ATP hydrolase, ATPIF1 has also been shown to play a regulatory role in cellular energy metabolism by triggering the induction of aerobic glycolysis in cancer cells resulting in their Warburg phenotype (3,4). Research studies demonstrate that the overexpression of ATPIF1 in several human carcinomas further supports its participation in oncogenesis and provides insight into the altered metabolism of cancer cells, which includes the reprogramming of energetic metabolism toward glycolysis (3).

Background References

1. Gledhill, J.R. et al. (2007) *Proc Natl Acad Sci USA* 104, 15671-6.
2. Cabezón, E. et al. (2003) *Nat Struct Biol* 10, 744-50.
3. Sánchez-Cenizo, L. et al. (2010) *J Biol Chem* 285, 25308-13.
4. Wallace, D.C. (2005) *Cold Spring Harb Symp Quant Biol* 70, 363-74.

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 **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin) **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: Human **Mk:** Monkey

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Limited Uses

force or effect.

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