

For Research Use Only

# Phospho-PDH E1 Alpha (Ser300) Polyclonal antibody



Catalog Number: 29583-1-AP

1 Publications

## Basic Information

<b>Catalog Number:</b> 29583-1-AP	<b>GenBank Accession Number:</b> BC002406	<b>Purification Method:</b> Antigen affinity purification
<b>Size:</b> 100ul , Concentration: 450 µg/ml by Nanodrop;	<b>GeneID (NCBI):</b> 5160	<b>Recommended Dilutions:</b> WB 1:2000-1:14000 IF 1:50-1:500
<b>Source:</b> Rabbit	<b>Full Name:</b> pyruvate dehydrogenase (lipoamide) alpha 1	
<b>Isotype:</b> IgG	<b>Calculated MW:</b> 43 kDa	
	<b>Observed MW:</b> 40 kDa	

## Applications

**Tested Applications:**  
IF, WB, ELISA

**Cited Applications:**  
WB

**Species Specificity:**  
Human

**Cited Species:**  
mouse

**Positive Controls:**

**WB :** Serum-free treated HeLa cells, 10 % fetal bovine serum treated HeLa cells

**IF :** λ phosphatase treated HepG2 cells,

## Background Information

PDH E1 Alpha (PDHA1), as the major component of PDH, can be phosphorylated and inactivated by PDHK1. PDHA1 contains three serine residues (Ser232, Ser293, or Ser300) that can be reversibly phosphorylated by a dedicated family of four inhibitory pyruvate dehydrogenase kinases (PDHK1-4) and two reactivating phosphatases (PDP1, 2). Hypoxia induces the expression of PDHK1 and PDHK3 and hyperphosphorylates PDHA1. Phosphorylated PDHA1 inactivates the whole pyruvate dehydrogenase complex (PDC), reduces pyruvate entering into the tricarboxylic acid (TCA) cycle for oxidative phosphorylation, enhances the Warburg effect and promotes tumorigenesis. (PMID: 30993888, PMID: 34749809)

## Notable Publications

Author	Pubmed ID	Journal	Application
Yuan Yao	37935660	Cell Death Dis	WB

## Storage

**Storage:**

Store at -20°C. Stable for one year after shipment.

**Storage Buffer:**

PBS with 0.02% sodium azide and 50% glycerol pH 7.3.

Aliquoting is unnecessary for -20°C storage

\*\*\* 20ul sizes contain 0.1% BSA

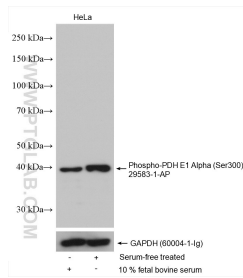
For technical support and original validation data for this product please contact:

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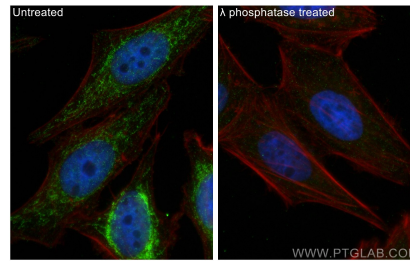
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## Selected Validation Data



10 % fetal bovine serum treated HeLa cells and Serum-free treated HeLa cells were subjected to SDS PAGE followed by western blot with 29583-1-AP (Phospho-PDH E1 Alpha (Ser300) antibody) at dilution of 1:7000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with GAPDH antibody as loading control.



Immunofluorescent analysis of (4% PFA) fixed  $\lambda$  phosphatase treated HepG2 cells using Phospho-PDH E1 Alpha (Ser300) antibody (29583-1-AP) at dilution of 1:200 and CoraLite@488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L), CL594-Phalloidin (red).