#3205 Store at -20C

Pyruvate Dehydrogenase (C54G1) 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:
WB, IHC-P	H M R Mk	Endogenous	43	Rabbit IgG	#P08559	5160

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunohistochemistry (Paraffin)	1:50 - 1:200

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 #72322.

Specificity / Sensitivity

Pyruvate Dehydrogenase (C54G1) Rabbit mAb detects endogenous levels of total pyruvate dehydrogenase α1 subunit.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to the sequence of human pyruvate dehydrogenase.

Background

The pyruvate dehydrogenase complex catalyzes the conversion of pyruvate and CoA into acetyl-CoA and CO_2 in the presence of NAD^+. Acetyl-CoA then goes into the citric acid cycle where it reacts with oxaloacetate to form citrate. Acetyl-CoA is also used for fatty acid and cholesterol biosynthesis. The reaction of oxidative decarboxylation of pyruvate therefore serves as a critical link between glycolysis and the citric acid cycle and lipid metabolism. In mammalian cells, the pyruvate dehydrogenase complex is located in the mitochondrial matrix (1). This complex is comprised of three enzymes: pyruvate dehydrogenase (E1), dihydrolipoamide acetyltransferase (E2), and dihydrolipoamide dehydrogenase (E3). Pyruvate dehydrogenase (E1) consists of two subunits: α and β. This enzyme catalyzes the removal of CO_2 from pyruvate. Mutations in the α subunits of pyruvate dehydrogenase (E1) lead to congenital defects that are usually associated with lactic acidosis, neurodegeneration, and early death (2).

Background References

1. Strumiło, S. (2005) *Acta Biochim Pol* 52, 759-64.
2. Stacpoole, P.W. et al. (2003) *Curr Gene Ther* 3, 239-45.

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

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

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

Trademarks and Patents

Limited Uses

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