Revision 1

Store at -20C

#54542

Phospho-HNF1α (Ser247) Antibody

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	H	Endogenous	81	Rabbit	#P20823	6927

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

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

Specificity/Sensitivity

HNF1α (Ser247) Antibody recognizes endogenous levels of HNF1α protein only when phosphorylated at Ser247.

Species predicted to react based on 100% sequence homology

Mouse, Rat

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ser247 of human HNF1α protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Hepatocyte nuclear factor 1α (HNF1α, also known as TCF1 or MODY3) is a transcription factor that plays a role in the tissue-specific regulation of liver gene expression (1). Research has shown that heterogeneous mutations of HNF1α are linked to maturity onset diabetes of the young (MODY) (2). Recent studies indicate that increased concentrations of free fatty acids can reduce the expression of FoxA2/HNF3β and HNF1α in pancreatic β-cells and lead to their nuclear exclusion, resulting in symptoms of several metabolic syndromes (3).
HNF1α is inhibited through Akt2-mediated phosphorylation at Ser247 and is a negative regulator of PPARγ gene transcription. Research studies have shown that inhibition of PPARγ is beneficial in steatosis-associated liver cancer in mouse models (4).

Background References

1. Yamagata, K. et al. (1996) *Nature* 384, 455-8.
2. Lehto, M. et al. (1997) *J Clin Invest* 99, 582-91.
3. Ohtsubo, K. et al. (2011) *Nat Med* 17, 1067-75.
4. Patitucci, C. et al. (2017) *J Clin Invest* 127, 1873-1888.

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

Cross-Reactivity Key

H: Human

Trademarks and Patents

Limited Uses

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