

ChREBP Antibody



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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 M R	Endogenous	110	Rabbit	#Q9NP71	51085

Product Usage Information

Application

Western Blotting

Dilution

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

ChREBP Antibody recognizes endogenous levels of total ChREBP protein. Based on amino acid sequence comparisons, the antibody is predicted to detect all known isoforms of ChREBP.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu308 of human ChREBP isoform α protein. The sequence surrounding this region is 100% conserved in all known isoforms of ChREBP. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Carbohydrate-responsive element-binding protein (ChREBP) is a glucose-responsive transcription factor that regulates glycolytic and lipogenic gene expression (1). High levels of glucose induce the transcriptional activity of ChREBP. ChREBP is most abundant in tissues of *de novo* lipogenesis and forms a heterotetramer with its binding partner MLX to bind to the promoter regions of its target genes (2). ChREBP regulates fatty acid synthesis, glucose homeostasis and insulin sensitivity in white adipose tissue. In white adipose tissue, ChREBP isoform α (ChREBP- α) activates the expression of the potent ChREBP isoform β (ChREBP- β) in a glucose-dependent manner. *ChREBP- β* expression levels predict insulin sensitivity in human white adipose tissue (1). In addition, research studies have shown that Akt2 induces the transcriptional activity of ChREBP- β to stimulate *de novo* lipogenesis in brown adipose tissue for fuel storage (3). Furthermore, ChREBP- β is a potent activator of lipogenesis in the liver (4).

Background References

1. Herman, M.A. et al. (2012) *Nature* 484, 333-8.
2. Abdul-Wahed, A. et al. (2017) *Cell Metab* 26, 324-341.
3. Sanchez-Gurmaches, J. et al. (2018) *Cell Metab* 27, 195-209.e6.
4. White, P.J. et al. (2018) *Cell Metab* 27, 1281-1293.e7.

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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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