

Use siRNA to knowndown Cebp-alpha

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## About Cebp-alpha

Protein	Gene	Organsim
CCAAT/enhancer-binding protein beta	Cebpb	Mouse

*This intronless gene encodes a transcription factor that contains a basic leucine zipper (bZIP) domain and recognizes the CCAAT motif in the promoters of target genes. The encoded protein functions in homodimers and also heterodimers with CCAAT/enhancer-binding proteins beta and gamma. Activity of this protein can modulate the expression of genes involved in cell cycle regulation as well as in body weight homeostasis. [provided by RefSeq, Sep 2014]*

# Methods and Materials

- ▶ Choose target gene
- ▶ Design siRNA and qPCR primer
- ▶ Using absolute qPCR to choose better qPCR primer
- ▶ Transfection siRNA to 3T3
- ▶ Isolate RNA & reverse RNA
- ▶ Using relative qPCR to measure the expression of Cebp-alpha

# siRNA and Primer Design

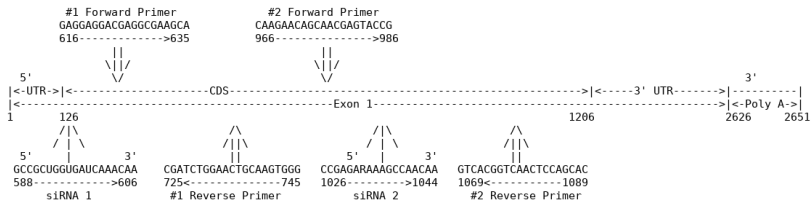


Figure 1: siRNA and Primer Design

# Real-time PCR, or qPCR

qPCR provide a **simple** and **elegant** method for determining the **amount of a target sequence** that is present in a sample.

- ▶ Compare with end-point PCR (Traditional PCR + Gel electrophoresis)
- ▶ Fast: no gel electrophoresis
- ▶ Less pollution: Don't need to open tube

# Absolute qPCR

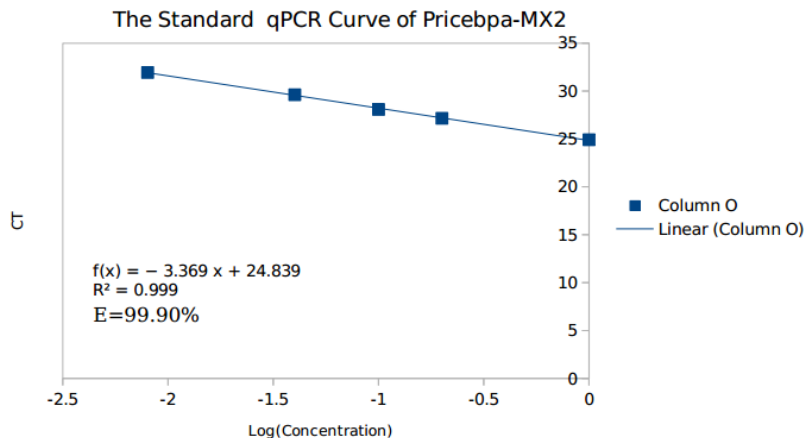


Figure 2: The Standard qPCR Curve of Pricebpa-MX2

## Result & Conclusion