Author Summary what is this?

Title : A functional analysis of the CREB signaling pathway using HaloCHIP-chip and high throughput reporter assays.

Abstract :

Regulation of gene expression is essential for normal development and cellular growth. Transcriptional events are tightly controlled both spatially and temporally by specific DNA-protein interactions. In this study we finely map the genome-wide targets of the CREB protein across all known and predicted human promoters, and characterize the functional consequences of a subset of these binding events using high-throughput reporter assays. To measure CREB binding, we used HaloCHIP, an antibody-free alternative to the ChIP method that utilizes the HaloTag fusion protein, and also high-throughput promoter-luciferase reporter assays, which provide rapid and quantitative screening of promoters for transcriptional activation or repression in living cells.

View in PubMed

Experimental Details what is this?

BIOBASE experiment accession : EX00075

Binding factor : CREB1(h)

Consensus binding sequence for the factor : 

Profiles

Details of the experiment which identified binding by the factor : ChIP-on-chip using cell source: HeLa S3

Data Prepared for Further Analysis what is this?

Sequenced fragments

- (•) Complete fragments (2807 items)
- ( ) Predicted best binding sites (2807 items) for CREB1(h) within the fragments

FASTA ↓ .BED ↓

Genes located near sequenced fragments

Nearest genes located within

- (•) 10,000 bp of sequenced fragments
- ( ) 150,000 bp of sequenced fragments
- ( ) specified bp of sequenced fragments:

Tab-delimited gene list ↓