

PPAR alpha Transcription Factor Assay Kit ab133107

5 References 1 Image

Overview

Product name	PPAR alpha Transcription Factor Assay Kit
Detection method	Colorimetric
Sample type	Adherent cells, Suspension cells, Nuclear Extracts
Assay type	Semi-quantitative
Species reactivity	Reacts with: Mouse, Rat, Human
Product overview	<p>Abcam's PPAR alpha Transcription Factor Assay Kit (ab133107) is a non-radioactive, sensitive method for detecting specific transcription factor DNA binding activity in nuclear extracts.</p> <p>A 96-well enzyme-linked immunosorbent assay (ELISA) replaces the cumbersome radioactive electrophoretic mobility shift assay (EMSA). A specific double stranded DNA (dsDNA) sequence containing the peroxisome proliferator response element (PPRE) is immobilized onto the bottom of wells of a 96-well plate. PPARs contained in a nuclear extract, bind specifically to the PPRE. PPAR alpha is detected by addition of specific primary antibody directed against PPAR alpha. A secondary antibody conjugated to HRP is added to provide a sensitive colorimetric readout at 450 nm. PPAR alpha Transcription Factor Assay will not cross-react with PPAR gamma or PPAR delta.</p>
Notes	<p>Peroxisome proliferator-activated receptors (PPARs) are ligand activated nuclear receptors. Three PPAR subtypes have been identified: alpha, delta and gamma. PPARs can be activated by polyunsaturated fatty acids, eicosanoids and various synthtic ligands.</p> <p>PPAR alpha is predominantly expressed in liver, heart and kidneys. Upon activation by ligands such as free fatty acids, lipids and other small molecules, PPAR alpha forms a heterodimeric complex with RXR alpha, and this complex will bind to response elements allowing transcription of target genes involved in lipid metabolism.</p>
Platform	Microplate reader

Properties

Storage instructions Please refer to protocols.

Components	96 tests
96-Well Plate Cover	1 unit

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Polysorbate 20	1 vial
Transcription Factor Antibody Binding Buffer (10X)	1 x 3ml
Transcription Factor Binding Assay Buffer (4X)	1 x 3ml
Transcription Factor Developing Solution	1 x 12ml
Transcription Factor Goat Anti-Rabbit HRP Conjugate	1 x 100µl
Transcription Factor PPAR 96-Well Strip Plate	1 unit
Transcription Factor PPAR alpha Positive Control	1 vial
Transcription Factor PPAR alpha Primary Antibody	1 vial
Transcription Factor PPAR Competitor dsDNA	1 vial
Transcription Factor Reagent A	1 x 120µl
Transcription Factor Stop Solution	1 x 12ml
Wash Buffer Concentrate (400X)	1 x 5ml

Function

Ligand-activated transcription factor. Key regulator of lipid metabolism. Activated by the endogenous ligand 1-palmitoyl-2-oleoyl-sn-glycerol-3-phosphocholine (16:0/18:1-GPC). Activated by oleylethanolamide, a naturally occurring lipid that regulates satiety (By similarity). Receptor for peroxisome proliferators such as hypolipidemic drugs and fatty acids. Regulates the peroxisomal beta-oxidation pathway of fatty acids. Functions as transcription activator for the ACOX1 and P450 genes. Transactivation activity requires heterodimerization with RXRA and is antagonized by NR2C2.

Tissue specificity

Skeletal muscle, liver, heart and kidney.

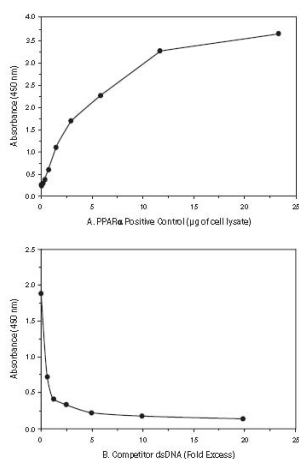
Sequence similarities

Belongs to the nuclear hormone receptor family. NR1 subfamily.
Contains 1 nuclear receptor DNA-binding domain.

Cellular localization

Nucleus.

Images



Panel A: Increasing amounts of positive control (total lysate) are assayed for PPAR alpha DNA-binding activity using ab133107.

Panel B: PPAR alpha DNA-binding assays are performed in the presence of competitive dsDNA. The decrease in signal caused by addition of competitive dsDNA confirms the assay specificity.

Functional Studies - PPAR alpha Transcription
Factor Assay Kit (ab133107)

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