Data Sheet (Cat.No.TMAY-02428)

TargetMol

Anti-PPM1A Antibody (9X611)

Product Details

Ig Type:	Mouse IgG2a
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	9X611
Purification:	Protein A

Applications

Verified Activity:	1. Immunofluorescence staining of Human PPM1A in MCF7 cells. Cells were fixed with 4% PFA, permeabilzed with 1% Triton X-100 in PBS, blocked with 10% serum, and incubated with Mouse anti-Human PPM1A monoclonal antibody (1:60) at 4°C overnight. Then cells were stained with the Alexa Fluor® 488-conjugated Goat Anti-mouse IgG secondary antibody (green) and counterstained with DAPI (blue). Positive staining was localized to cytoplasm. 2. Flow cytometric analysis of Human PPM1A expression on Jurkat cells. The cells were treated according to manufacturer's manual (BD Pharmingen™ Cat. No. 554714), stained with purified anti-Human PPM1A, then a FITC-conjugated second step antibody. The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of intact cells.
Application:	FCM,ICC/IF
Recommended	ICC-IF: 1:20-1:100; FCM: 1:25-1:100

Properties

Stability & Storage:	Store at 2°C-8°C for 1 month. Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles. Preservative-Free.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen:	Recombinant Protein: Human PPM1A / PP2C-alpha protein (TMPY-02567)
Antigen Species:	Human
Synonyms:	PP2CA;PP2Cα;protein phosphatase, Mg2+/Mn2+ dependent, 1A;PP2C-ALPHA;PP2Calpha;PP2C-α
Biology Area:	Phosphatases and Regulators

Research Background

Protein phosphatase 1A (PPM1A / PP2CA) is an enzyme belonging to the PP2C family of Ser / Thr protein phosphatases. Members of PP2C family are negative regulators of cell stress response pathways and the MAP kinases and MAP kinase kinases. It has also been demonstrated to inhibit the activation of p38 and JNK kinase cascades. PPM1A dephosphorylates and promotes nuclear export of TGFβ-activated Smad2/3. Ectopic expression of PPM1A abolishes TGFβ-induced antiproliferative and transcriptional responses, whereas depletion of PPM1A enhances TGFβ signaling in mammalian cells. It has been demonstrated that PPM1A / PP2CA, through dephosphorylation of Smad2/3, plays a critical role in terminating TGFβ signaling. Overexpression of PPM1A is

reported to activate the expression of the tumor suppressor gene TP53 / p53, which leads to cell apoptosis.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481