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Rabbit Anti-E2F1 antibody

SL0599R

Product Name	E2F1
Chinese Name	转录因子 E2F-1 抗体
Alias	E2F 1; E2F transcription factor 1; E2F-1; E2f1 E2F transcription factor 1; KIAA4009; mKIAA4009; OTTHUMP00000030661; PBR 3; PBR3; PRB binding protein E2F 1; PRB-binding protein E2F-1; RBAP 1; RBAP-1; RBAP1; RBBP 3; RBBP-3; RBBP3; RBP 3; RBP3; Retinoblastoma associated protein 1; Retinoblastoma binding protein 3; Retinoblastoma-associated protein 1; Retinoblastoma-binding protein 3; Transcription factor E2F1; E2F1_HUMAN.
Research Area	Tumour transcriptional regulatory factor Epigenetics
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Human, Mouse, Rat,
Applications	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	46kDa
Cellular localization	The nucleus
Form	Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human E2F1: 101-180/437
Lsotype	IgG
Purification	affinity purified by Protein A
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.

Attention This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

PubMed PubMed

Product Detail

The protein encoded by this gene is a member of the E2F family of transcription factors. The E2F family plays a crucial role in the control of cell cycle and action of tumor suppressor proteins and is also a target of the transforming proteins of small DNA tumor viruses. The E2F proteins contain several evolutionally conserved domains found in most members of the family. These domains include a DNA binding domain, a dimerization domain which determines interaction with the differentiation regulated transcription factor proteins (DP), a transactivation domain enriched in acidic amino acids, and a tumor suppressor protein association domain which is embedded within the transactivation domain. This protein and another 2 members, E2F2 and E2F3, have an additional cyclin binding domain. This protein binds preferentially to retinoblastoma protein pRB in a cell-cycle dependent manner. It can mediate both cell proliferation and p53-dependent/independent apoptosis. [provided by RefSeq, Jul 2008]

Function:
Transcription activator that binds DNA cooperatively with dp proteins through the E2 recognition site, 5'-TTTC[CG]CGC-3' found in the promoter region of a number of genes whose products are involved in cell cycle regulation or in DNA replication. The DRTF1/E2F complex functions in the control of cell-cycle progression from G1 to S phase. E2F-1 binds preferentially RB1 protein, in a cell-cycle dependent manner. It can mediate both cell proliferation and p53-dependent apoptosis.

Subunit:
Component of the DRTF1/E2F transcription factor complex. Forms heterodimers with DP family members. The E2F-1 complex binds specifically hypophosphorylated retinoblastoma protein RB1. During the cell cycle, RB1 becomes phosphorylated in mid-to-late G1 phase, detaches from the DRTF1/E2F complex, rendering E2F transcriptionally active. Interacts with TRRAP, which probably mediates its interaction with histone acetyltransferase complexes, leading to transcription activation. Binds TOPBP1. Interacts with ARID3A. Binds EAPP.

Subcellular Location:
Nucleus.

Post-translational modifications:
Phosphorylated by CDK2 and cyclin A-CDK2 in the S-phase. Acetylation stimulates DNA-binding. Enhanced under stress conditions such as DNA damage and inhibited by retinoblastoma protein pRB. Regulated by KAP1/TRIM28 which recruits HDAC1 to E2F1 resulting in deacetylation. Acetylated by P/CAF/KAT2B.

Similarity:

Belongs to the E2F/DP family.

SWISS:
Q01094

Gene ID:
1869

Database links:

Entrez Gene: 1869 Human

Entrez Gene: 13555 Mouse

Entrez Gene: 399489 Rat

Omim: 189971 Human

SwissProt: Q01094 Human

SwissProt: Q61501 Mouse

SwissProt: O09139 Rat

Unigene: 654393 Human

Unigene: 18036 Mouse

Unigene: 72471 Rat

transcriptional regulatory factor（Transcriptin Regulators）
E2F1—属于调节性转录因子 E2F 家族。有学者认为：E2F-1 既可作为癌基因起作用，又可作为抑癌基因起作用。其不同可能由细胞中其他生长促进或抑制性蛋白质水平和（或）活性决定，同时与细胞所处环境及器官特异性有关。在控制细胞周期和 Tumour 抑制基因蛋白的活性方面起关键作用。

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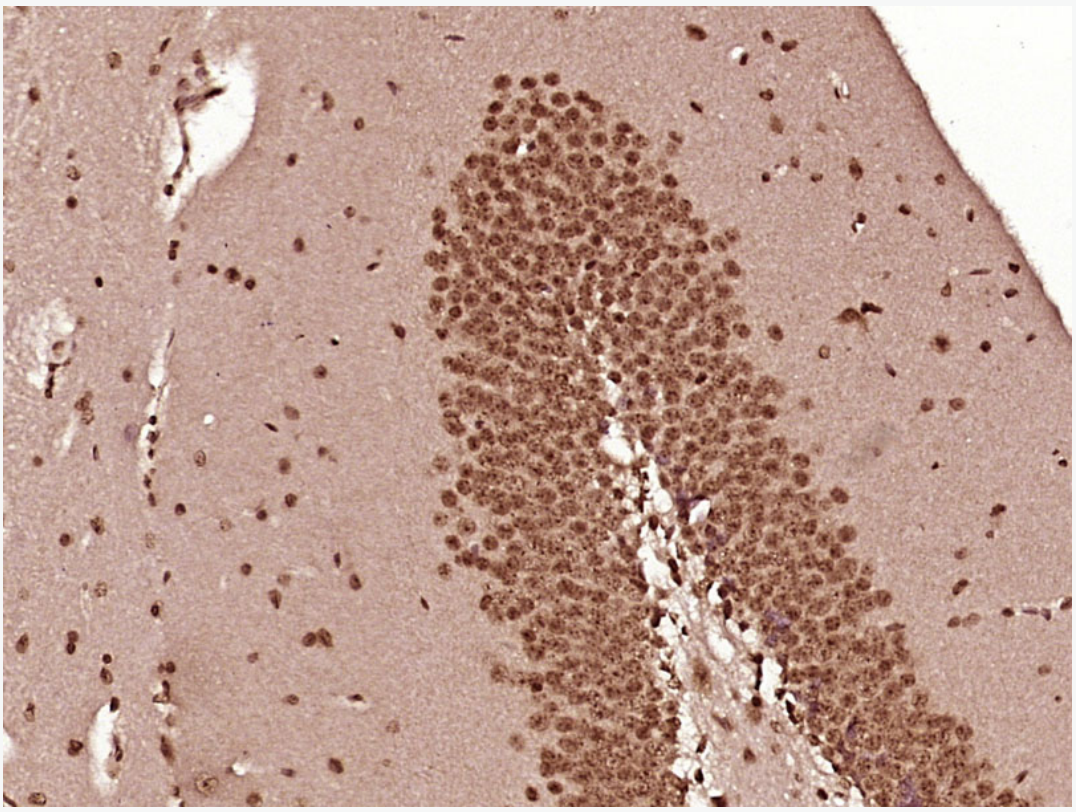
Product Picture



Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (E2F1) Polyclonal Antibody, Unconjugated (SL0599R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

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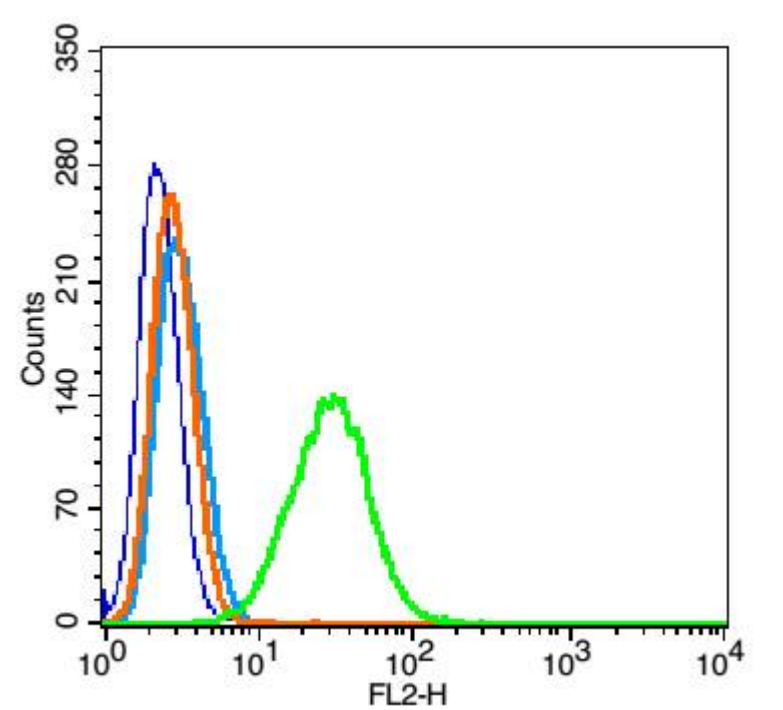


Blank control:RSC96 cells(blue).

Primary Antibody:Rabbit Anti-E2F1 antibody(SL0599R), Dilution: 0.2μg in 100 μL 1X PBS containing 0.5% BSA;

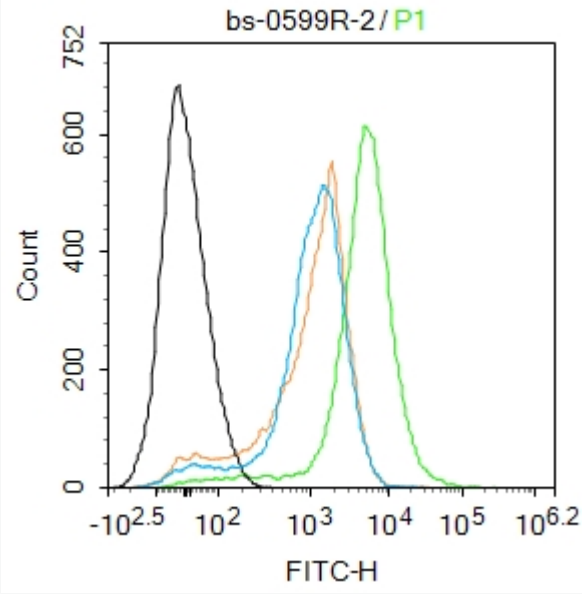
Isotype Control Antibody: Rabbit IgG(orange) ,used under the same conditions);

Secondary Antibody: Goat anti-rabbit IgG-PE(white blue), Dilution: 1:200 in 1 X PBS containing 0.5% BSA.

Protocol

The cells were fixed with 2% paraformaldehyde (10 min) , then permeabilized with 90% ice-cold methanol for 30 min on ice. Primary antibody (SL0599R,0.2μg /1x10^6 cells) were incubated for 30 min on the ice, followed by 1 X PBS containing 0.5% BSA + 1 0% goat serum (15 min) to block non-specific protein-protein interactions.

Then the Goat Anti-rabbit IgG/PE antibody was added into the blocking buffer mentioned above to react with the primary antibody at 1/200 dilution for 30 min on ice. Acquisition of 20,000 events was performed.



Blank control:Mosue spleen.

Primary Antibody (green line): Rabbit Anti-E2F1 antibody (SL0599R)

Dilution: 2µg /10^6 cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody : Goat anti-rabbit IgG-FITC

Dilution: 1µg /test.

Protocol

The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 90% ice-cold methanol for 20 min at -20℃. The cells were then

incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.