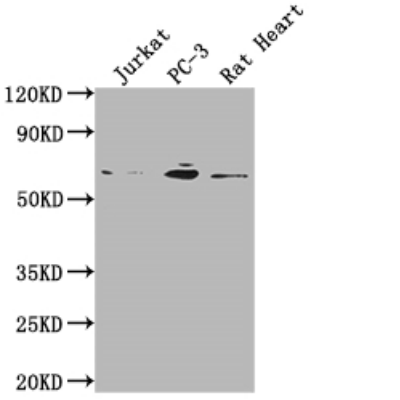
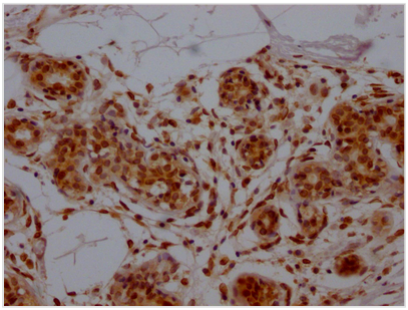
E2F1 Recombinant Monoclonal Antibody

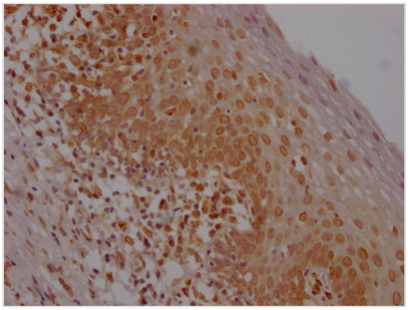
Product Code	CSB-RA826096A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	Q01094
Immunogen	A synthesized peptide derived from human E2F1
Species Reactivity	Human, Rat
Tested Applications	ELISA, WB, IHC, IF, FC; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200, IF:1:20-1:200, FC:1:20-1:200
Relevance	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. E2F1 binds preferentially RB1 in a cell-cycle dependent manner. It can mediate both cell proliferation and TP53/p53-dependent apoptosis. Blocks adipocyte differentiation by binding to specific promoters repressing CEBPA binding to its target gene promoters (PubMed:20176812).
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Epigenetics and Nuclear Signaling; Cancer
Gene Names	E2F1
Clone No.	1D12
Image	



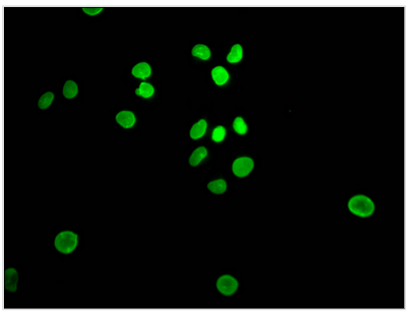
Western Blot
Positive WB detected in: Jurkat whole cell lysate, PC-3 whole cell lysate, Rat Heart tissue
All lanes: E2F1 antibody at 1:2000
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 47 kDa
Observed band size: 60 kDa



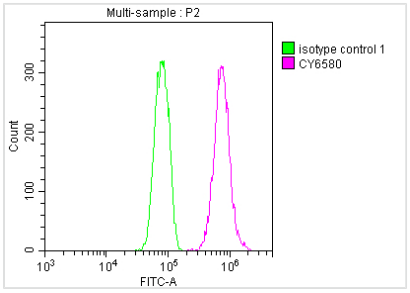
IHC image of CSB-RA826096A0HU diluted at 1:100 and staining in paraffin-embedded human breast cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.



IHC image of CSB-RA826096A0HU diluted at 1:100 and staining in paraffin-embedded human tonsil tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.



Immunofluorescence staining of Hela Cells with CSB-RA826096A0HU at 1:50, counter-stained with DAPI. The cells were fixed in 4% formaldehyde, permeated by 0.2% TritonX-100, and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4?. Nuclear DNA was labeled in blue with DAPI. The secondary antibody was FITC-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L).



Overlay histogram showing Hela cells stained with CSB-RA826096A0HU (red line) at 1:50. The cells were fixed with 70% Ethylalcohol (18h) and then incubated in 10% normal goat serum to block non-specific protein-protein interactions followedby the antibody (1μg/1*10^6 cells) for 1 h at 4?.The secondary antibody used was FITC-conjugated goat anti-rabbit IgG (H+L) at 1/200 dilution for 30min at 4?. Control antibody (green line) was Rabbit IgG (1μg/1*10^6 cells) used under the same conditions. Acquisition of >10,000 events was performed.

Description

The E2F1 recombinant monoclonal antibody can be used to detect both human and rat E2F1 proteins in five assays including ELISA, WB, IHC, IF, and FC. It is produced using recombinant DNA technology. The gene that codes for the E2F1 monoclonal antibody is synthesized after sequencing the cDNA of the E2F1 antibody-producing hybridomas. The hybridomas are created by fusing myeloma cells with B cells isolated from an animal that has been immunized with a synthesized peptide derived from human E2F1. The synthesized gene is then incorporated into a vector and transfected into cells for cultivation. The resulting E2F1 recombinant monoclonal antibody is purified through affinity chromatography from the cell culture supernatant.

The E2F1 protein is a transcription factor that plays a key role in regulating the cell cycle and cell proliferation. E2F1 can activate the expression of genes required for progression through the G1/S phase transition of the cell cycle, including genes involved in DNA replication, DNA repair, and cell division. In addition, E2F1 can induce apoptosis in response to DNA damage or other stress signals. Dysregulation of E2F1 activity has been implicated in a variety of diseases, including cancer and developmental disorders.