Technical Data Sheet

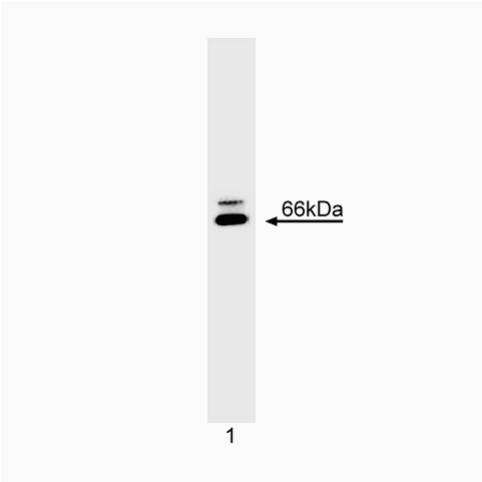
Purified Mouse Anti-Human E2F-3

Product Information

Material Number:	**556526**
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	TFE31
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Target MW:	66 kDa
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The transcription factor E2F was originally characterized as a sequence-specific DNA-binding factor. E2F is now known to be a family of related factors; E2F-1 through E2F6 have been cloned. E2F proteins form heterodimers with the related proteins, DP-1 and -2. These complexes are regulated by their interaction with the retinoblastoma proteins (Rb, p107 and p130), which restrict E2F/DP complexes to the cytoplasm. E2F inhibitors are phosphorylated during the cell cycle. Phosphorylation of inhibitory proteins releases the E2F/DP complex to enter the nucleus, thus providing regulated activation of E2F responsive genes. E2F-DNA binding sites have been found in the promoter regions of genes important for growth regulation, e.g., c-myc, N-myc, cdc2 and cyclin A and within genes which are important for DNA synthesis. Activation of specific gene(s) may depend on the formation of distinct E2F complexes. Cotransfection studies demonstrate specific interactions between E2F and DP proteins, i.e., E2F-1 through -5 bind to DP-1, while E2F-4 binds to DP-2.4 The E2Fs also display differential binding to pRb family members. E2F gene products can promote cell cycle aprogression and proliferation. E2F-1, -2 and -3 are transcriptional activators which by themselves can drive cells through S phase, and can override G1 block; E2F-4 and -5 require interaction with DP to do so. E2F-6 is unique in that it is not regulated by pRb family members and instead acts to repress transcription activation by other E2F members. E2F-3 migrates at a molecular weight of 66 kDa by SDS/PAGE. Clone TFE31 recognizes an epitope between amino acids 1 through 132 of human E2F-3. It does not cross-react with other E2F proteins. The specificity of the antibody was verified by immunoprecipitation of *in vitro* translated E2F-3 and by western blot analysis of cell extracts.



Western blot analysis of human E2F-3. *Lysates from Daudi Burkitt lymphoma cells were probed with anti E2F-3 (clone TFE31, Cat. No. 556526). E2F-3 is detected at ~66 kDa.*

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at 4°C.

Application Notes

Application

Western blot	Routinely Tested
Immunoprecipitation	Reported

Recommended Assay Procedure:

Applications include western blot analysis (1-2 µg/ml). Daudi Burkitt lymphoma cells (ATCC CCL-213) are recommended as a positive control for western blot analysis. TFE31 may also be used for immunoprecipitation of in vitro translated E2F-2 protein.

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

References

Lukas J, Petersen BO, Holm K, Bartek J, Helin K. Deregulated expression of E2F family members induces S-phase entry and overcomes p16INK4A-mediated growth suppression. *Mol Cell Biol.* 1996; 16(3):1047-1057.(Biology)

Magae J, Wu CL, Illenye S, Harlow E, Heintz NH. Nuclear localization of DP and E2F transcription factors by heterodimeric partners and retinoblastoma protein family members. *J Cell Sci.* 1996; 109(7):1717-1726.(Biology)

Nevins JR. E2F: a link between the Rb tumor suppressor protein and viral oncoproteins. *Science.* 1992; 258(5081):424-429.(Biology)

Sladek TL. E2F transcription factor action, regulation and possible role in human cancer. *Cell Prolif.* 1997; 30(3-4):97-105.(Biology)

Trimarchi JM, Fairchild B, Verona R, Moberg K, Andon N, Lees JA. E2F-6, a member of the E2F family that can behave as a transcriptional repressor. *Proc Natl Acad Sci U S A.* 1998; 95(6):2850-2855.(Biology)