

Certificate of Analysis

Product: Affinity Purified Anti-Transcription Initiation Factor TFIID Subunit 1 (TAF1) [Rabbit]

Code: 600-401-995

Lot # 19133

Size: 100 µg

Physical State: Liquid (sterile filtered)

Protein Concentration: 1.15 mg/ml (by UV absorbance at 280 nm)

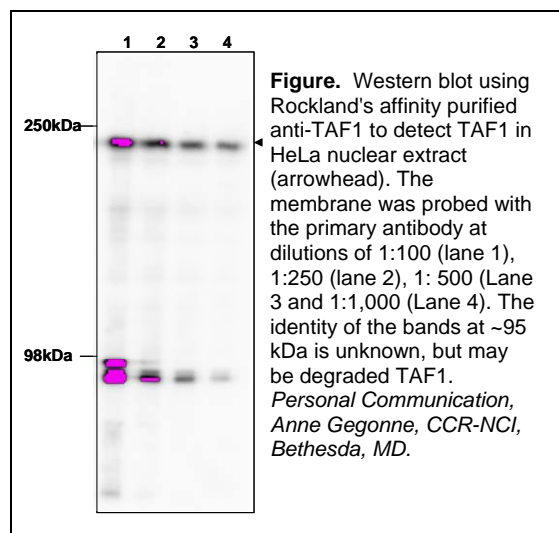
Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

Stabilizer: None

Preservative: 0.01% (w/v) Sodium Azide

Storage Conditions: Store vial at -20° C or below prior to opening. For extended storage, aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Dilute only prior to immediate use. Expiration date is one (1) year from date of opening product.

Background Information: Transcription Initiation Factor TFIID Subunit 1 (TAF1) is the largest component and core scaffold of the TFIID basal transcription factor complex, which also includes TATA-binding protein (TBP) and a variety of TBP-associated factors. TFIID nucleates the formation of transcription pre-initiation complexes and plays a key role in the regulation of gene expression by RNA polymerase II. TAF1 possesses DNA-binding activity and also contains novel N- and C-terminal Ser/Thr kinase domains which can auto-phosphorylate or trans-phosphorylate other transcription factors. For example, TAF1 interacts with the C-terminus of TP53 and phosphorylates the T55 residue, leading to MDM2-mediated degradation of TP53. TAF1 also catalyzes Ser phosphorylation of general transcription factor IIA (GTF2A1) and IIF (GTF2F1). The retinoblastoma tumor suppressor protein, RB1, interacts with the N-terminal domain of TAF1 and inhibits its intrinsic kinase activity. TAF1 is essential for progression through the G1 phase of the cell cycle and has been reported to be indispensable for expression of 18% of mammalian genes.



Application Note(s): This affinity purified antibody has been tested for use in ELISA and western blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 213 kDa in size corresponding to TAF1 protein by western blotting in the appropriate cell lysate or extract.

Recommended Dilutions:

| | |
|-----------------------------|---------------------|
| ELISA | 1:10,000 - 1:50,000 |
| WESTERN BLOT | 1:100 - 1:2,000 |
| IMMUNOHISTOCHEMISTRY | User Optimized |
| OTHER APPLICATIONS | User Optimized |

Purity and Specificity: This affinity purified antibody is directed against human TAF1 protein. The product was affinity purified from monospecific antiserum by immunoaffinity chromatography. A BLAST analysis was used to suggest cross-reactivity with TAF1 protein from human, mouse and rat based on 100% homology with the immunizing sequence. Reactivity against homologues from other sources is not known.

Immunogen: This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to amino acids near the carboxyl terminus of human TAF1.

Relevant Links: NCBI [P21675](#) Swiss-Prot [P21675](#)

Related Product(s):

| | |
|-------------------------------|--|
| # 611-703-127 | Peroxidase Conjugated Affinity Purified Anti-RABBIT IgG (H&L) (DONKEY) MX10 |
| # 611-132-122 | IRDye® 800 Conjugated Affinity Purified Anti-RABBIT IgG (H&L) (GOAT) MX10 |
| # B501-0500 | BLOTTO (500 g) |
| # BSA-30 | 30% BOVINE SERUM ALBUMIN SOL'N in 0.85% sodium chloride (no preservative or stabilizer) (500 ml) |
| # B304 | NORMAL GOAT SERUM (NGS) (10 ml) |
| # KIA-003 | MaxTag™ Anti-RABBIT IgG Kit for Immunoblotting |
| # MB-070 | Blocking Buffer for Fluorescent Western Blotting |

General References:

Ruppert, S., Wang, E.H. and Tjian, R. (1993) Cloning and expression of human TAFII250: a TBP-associated factor implicated in cell-cycle regulation. *Nature* **362** (6416), 175-179.

Hisatake, K., Hasegawa, S., Takada, R., Nakatani, Y., Horikoshi, M. and Roeder, R.G. (1993) The p250 subunit of native TATA box-binding factor TFIID is the cell-cycle regulatory protein CCG1. *Nature* **362** (6416), 179-181.

O'Brien, T. and Tjian, R. (1998) Functional analysis of the human TAFII250 N-terminal kinase domain. *Mol. Cell* **1** (6), 905-911.

Siegert, J.L. and Robbins, P.D. (1999) Rb inhibits the intrinsic kinase activity of TATA-binding protein-associated factor TAFII250. *Mol. Cell. Biol.* **19** (1), 846-854.

Solow, S., Salunek, M., Ryan, R. and Lieberman, P.M. (2001) Taf(II) 250 phosphorylates human transcription factor IIA on serine residues important for TBP binding and transcription activity. *J. Biol. Chem.* **276** (19), 15886-15892.

Li, H.H., Li, A.G., Sheppard, H.M. and Liu, X. (2004) Phosphorylation on Thr-55 by TAF1 mediates degradation of p53: a role for TAF1 in cell G1 progression. *Mol. Cell* **13** (6), 867-878.

Jacobson, R.H., Ladurner, A.G., King, D.S. and Tjian, R. (2000) Structure and function of a human TAFII250 double bromodomain module. *Science* **288** (5470), 1422-1425.

USDA Certification: All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation.

Note: This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information.