



3050 Spruce Street
Saint Louis, Missouri 63103 USA
Telephone 800-325-5832 • (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

Product Information

Monoclonal Anti-dTAF40

Clone 4H6

produced in mouse, purified immunoglobulin

Catalog Number **T1702**

Product Description

Monoclonal Anti-dTAF40 (mouse IgG2a isotype) is derived from the hybridoma 4H6 produced by the fusion of mouse myeloma cells and splenocytes from Swiss Webster mice immunized with *Drosophila* TFIID complex (Gene ID: 32762).¹ The isotype is determined using a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2. The antibody is purified from culture supernatant of hybridoma cells grown in a bioreactor.

Monoclonal Anti-dTAF40 reacts specifically with *Drosophila* dTAF40 (~40 kDa). Applications include ELISA and immunoblotting.

TFIIA, B, D, E, F and H are general transcription factors that together with RNA polymerase II (Pol II) are responsible for the pre initiation complex involved in eukaryotic transcription. TFIID complex contains the TATA-binding protein (TBP) and over a dozen TBP-associated factors (TAFs). It binds to the core promoter, an important step in transcription initiation. TBP mediates promoter recognition through the sequence-specific binding of the TATA element found in many promoters.¹⁻⁴ This recruitment is a rate-limiting step in most of the promoters. The role of TAFs in transcription is not clear and it is proposed that they function as obligatory co-activators essential for activator response. Some of the promoters respond to specific TAFs. For example, inactivation of TAF145/130 affects the transcription of only a few genes, while inactivation of other TAFs like TAF17, TAF40, TAF60, TAF61/68 and TAF23/25 results in dramatic effects on a large number of genes transcribed by Pol II. TAF proteins were found also in other complexes like SAGA, TFTC and PCAF suggesting that they may have other functions in transcription.¹⁻⁴

TAF40 is an important TFIID TAF, which in yeast has been found to be responsible for the majority of Pol II mediated transcription activity.⁵ It has been shown that

TAF40 is responsible for the interaction of TFIID with TFIIA, which is important in cell growth.³

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~1.5 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For extended storage, freeze at -20 °C in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 1-2 µg/mL is recommended using nuclear extracts of D.Mel cells.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

1. Hoey, T., et al., *Cell*, **72**, 247-260 (1993).
2. Weinzierl, R.O.J., et al., *Nature*, **362**, 511-517 (1993).
3. Kraemer, S.M., et al., *Mol. Cell. Biol.*, **21**, 1737-1746 (2001).
4. Hochheimer, A., and Tjian, R., *Genes Dev.*, **17**, 1309-1320 (2003).
5. Komarnitsky, P.M., et al., *Genes Dev.*, **13**, 2484-2489 (1999).

EK,CS,KAA,PHC 08/07-1