

Product Information

Anti-p8/TTD-A (N-terminal)

produced in rabbit, IgG fraction of antiserum

Product Number **T9577**

Product Description

Anti-p8/TTD-A (N-terminal) is produced in rabbit using as immunogen a synthetic peptide corresponding to a fragment of human p8/TTD-A (GenelD: 404672) conjugated to KLH. The corresponding sequence is identical in rat and differs by one amino acid in mouse. Whole antiserum is fractionated and then further purified by ion-exchange chromatography to provide the IgG fraction of antiserum that is essentially free of other rabbit serum proteins.

Anti-p8/TTD-A (N-terminal) specifically recognizes human, rat, and mouse p8/TTD-A. It may be used in several immunochemical techniques including immunoblotting (~8 kDa) and immunofluorescence. Staining of the p8/TTD-A band in immunoblotting is specifically inhibited with the immunizing peptide.

The multi-protein transcription factor TFIIH is essential for both basal transcription and DNA repair.^{1,2} The TFIIH complex consists of ten subunits ERCC2, ERCC3, GTF2H1, GTF2H2, GTF2H3, GTF2H4, GTF2H5, MNAT1, CDK7, CCNH, and GTF2H5 (hereafter called p8/TTD-A, also known as TF2H5 and General transcription factor IIH polypeptide 5). It has been reported that defects in the tenth subunit of TGFIIH, p8/TTD-A, are responsible for the third group of the sun-sensitive form of trichothiodystrophy (TTD), a rare hereditary disorder.^{3,4}

It was demonstrated that the primary critical function of p8/TTD-A is in DNA repair where it triggers DNA opening by stimulating XPB ATPase activity.⁵ It is present both bound to TFIIH and as a free fraction that shuffles between the cytoplasm and nucleus. Induction of NER-type DNA lesions shifts the balance towards p8/TTD-A's more stable association with TFIIH.⁶ It was also shown to be required for the stability of the TFIIH complex since cells from patients with p8/TTD-A have reduced levels of TFIIH, while overexpressing p8/TTD-A restored the cellular level TFIIH complex.^{6,7}

Reagent

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

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze 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 dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working dilution of 1:250–1:500 is recommended using lysates of CHO or HEK-293T cells overexpressing human p8/TTD-A.

Note: Due to the low molecular mass of the protein, it is highly recommended to use a low molecular mass marker that includes 6.5 kDa and 11 kDa.

Immunofluorescence: a working dilution of 1:200–1:400 is recommended using paraformaldehyde fixed HEK-293T cells overexpressing human p8/TTD-A.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

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5. Coin, F. et al., *Mol. Cell*, **21**, 215-226 (2006).
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VS,SG,KAA,PHC,MAM 01/19-1