

Product Information

Anti-CPSF3 (C-terminal)

produced in rabbit, IgG fraction of antiserum

Product Number **C2747**

Product Description

Anti-CPSF3 (C-terminal) is produced in rabbit using as the immunogen a synthetic peptide corresponding to a fragment of human CPSF3 (GeneID: 51692) conjugated to KLH. The corresponding sequence differs by two amino acids in mouse and rat. 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-CPSF3 (C-terminal) specifically recognizes human CPSF3 (also known as Cleavage and polyadenylation specificity factor 73 kDa subunit, or CPSF-73 kDa). The antibody may be used in several immunochemical techniques including immunoblotting (~75 kDa). Staining of the CPSF3 band in immunoblotting is specifically inhibited with the immunizing peptide.

mRNA precursors are processed at the 3'-ends in a two-step reaction: endonucleolytic cleavage at the poly(A) site followed by the addition of adenylate residues to form a poly(A) tail. The mammalian mRNA 3' ends processing complex contains several sub-complexes. These include the cleavage-polyadenylation specificity factor (CPSF), which recognizes the nearly ubiquitous AAUAAA signal; cleavage stimulatory factor (CstF), which interacts with a less-conserved G/U-rich sequence situated downstream of the cleavage site; cleavage factors I and II (CFI and CFII) and finally poly(A) polymerase (PAP). CPSF is a large protein complex containing subunits of 160, 100, 73, and 30 kDa, referred to as CPSF1 (CPSF-160), CPSF2 (CPSF-100), CPSF3 (CPSF-73), and CPSF4 (CPSF-30), respectively, and hFip, all required for efficient cleavage and polyadenylation of pre-mRNAs.^{1,2} CPSF3 binds directly to the cleavage site in an AAUAAA-dependent manner,³ suggesting it might be the enzyme responsible for the cleavage reaction. Indeed, recent structural and biochemical studies provided direct evidence that CPSF3 is the endoribonuclease for the cleavage reaction in pre-mRNA 3'-end processing.^{4,5}

Reagent

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

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

Store at -20 °C. For continuous use, the product may be stored at 2-8 °C for up to one month. For extended storage, freeze in working aliquots at -20 °C. 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 antibody dilution of 1:250-1:500 is recommended using K-562 lysate.

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

References

1. Zhao, J. et al., *Microbiol. Mol. Biol. Rev.*, **63**, 405-445 (1999).
2. Mandel, C.R. et al., *Cell. Mol. Life Sci.*, **65**, 1099-1122 (2008).
3. Ryan, K. et al., *RNA*, **10**, 565-573 (2004).
4. Mandel, C.R. et al., *Nature*, **444**, 953-956 (2006).
5. Dominski, Z. et al., *Cell*, **123**, 37-48 (2005).

VS,SG,KAA,PHC,MAM 04/19-1