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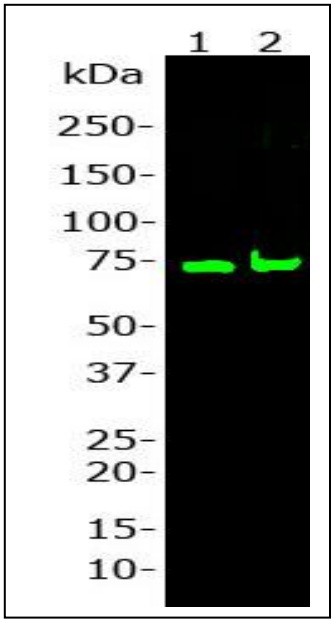
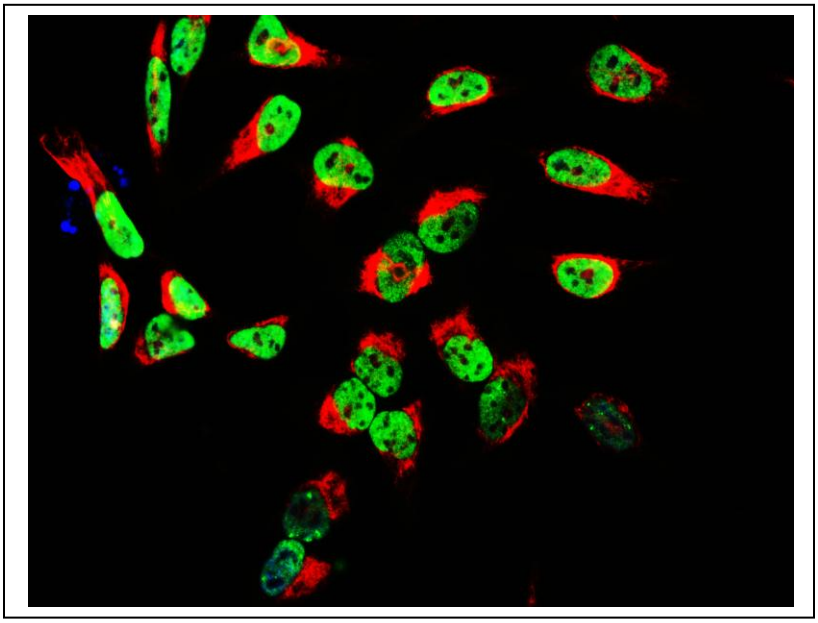
Catalogue# MCA-4D71: Mouse Monoclonal Antibody to TATA Box-binding protein associated factor 2N-TAF15

The Immunogen: TAF15 is a member of a family of 3 closely related mammalian RNA binding proteins, the other members being FUS/TLS and EWSR1. TDP43 is a more distant relative of these three. The protein is also known as RBP56, for RNA binding protein 56kDa (1). The Human Genome Organization (HUGO) Gene Nomenclature Committee (HGNC) name for this protein is TAF15. As with the other members of this family, TAF15 contains one copy of the ~90 amino acid RRM domain. RRM is an acronym for RNA Recognition Motif, and this domain is found in many proteins which bind single stranded RNA and DNA. It also has a single Zinc Finger domain of the ZnF_RBZ subtype found in Ran binding proteins. Ran is a small G protein related to p21-Ras which regulates the import and export of proteins to the nucleus.

Like TDP43, Fus/TLS and EWS, TAF15 is widely expressed in tissues and is localized primarily in the nucleus of cells (2). It was recently shown that point mutations in TAF15 may be associated with some familial forms of Lou Gehrig's disease, also known as amyotrophic lateral sclerosis or ALS (3). Fus/TLS and TDP43 protein mutations and aggregation have been implicated in various kinds of neurological disease including ALS (4).

MCA-4D71 was generated against full length recombinant human TAF15 expressed in and purified from *E. coli.* MCA-4D71 recognizes TAF15 specifically both in western blots and in immunocytochemical experiments. On blots MCA-4D71 reveals a prominent 68 kDa band, and on cells in tissue culture the antibody stains mainly in nucleus. For our antibody to TDP43, see MCA-3H8. The HGNC name for this protein is TAF15.





Left: Blot of 20 µg of HeLa cell lysate (lane 1) and 20 µg of Hek293 cell lysate (lane 2) was probed with MCA-4D71 at dilution 1: 1,000. The MCA-4D71 monoclonal binds strongly and cleanly to a band at about 68kDa coresponding to TAF15.. The MCA-4D71 monoclonal binds strongly and cleanly to a band at about 68 kDa. **Right:** shows HeLa cell cultures stained with MCA-4 D71 (green) and chicken antibody to vimentin CPCA-Vim (red). MCA-4D71 reveals a granular nuclear localization typical of many RNA associated proteins. Blue is a DNA stain.

Antibody characteristics: MCA-4D71 is a mouse IgG1 class antibody with a κ light chain. MCA-4D71 recognizes TAF15 specifically both in western blots and in immunocytochemical experiments. On blots MCA-4D71 reveals a prominent 68 kDa band, and on cells in tissue culture the antibody stains mainly in nucleus.

Suggestions for use: The antibody solution is protein G purified from tissue culture supernatant and is at concentration of 1 mg/mL in phosphate buffered saline preparation containing 0.05% sodium azide preservative. The antibody solution can be used at dilutions 1: 1,000-2,000 for immunofluorescence. For western blots try at 1: 1,000-2,000. A suitable control tissue is HeLa cell lysates. Avoid repeated freezing and thawing, store at 4°C or -20°C.

References:

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