# Product datasheet

## anti-DNA mouse monoclonal, AC-30-10, liquid, purified

### Short overview

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| **Cat. No.** | 690014 |
| **Quantity** | 1 ml |
| **Concentration** | 100 µg/ml (100 µg) |

### Product description

| | |
|---|---|
| **Host** | Mouse |
| **Antibody Type** | Monoclonal |
| **Isotype** | IgM |
| **Clone** | AC-30-10 |
| **Immunogen** | Double- and single-stranded DNA |
| **Formulation** | PBS pH 7.4 with 0.09% sodium azide and 0.5% BSA |
| **Conjugate** | Unconjugated |
| **Purification** | Size exclusion chromatography |
| **Storage** | 2-8°C |
| **Intended use** | Research use only |
| **Application** | Dot blot, ICC/IF, IHC |
| **Reactivity** | All species |

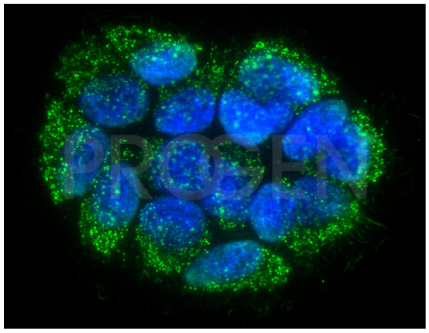
### Applications

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|---|---|
| **Dot Blot** | Assay dependent (on nitrocellulose membrane, after baking at 70°C) |
| **Immunocytochemistry (ICC)** | 1:200 (0.5 µg/ml) |
| **Immunohistochemistry (IHC) - frozen** | 1:10 (10 µg/ml) |
| **Immunohistochemistry (IHC) - paraffin** | 1:10 (10 µg/ml, microwave treatment recommended) |

### Background

AC-30-10 stains DNA present in the nuclei and the mitochondria of cells and tissues. It is also a reliable positive control in assays for detection of DNA antibodies, especially for the detection of autoantibodies in autoimmune diseases. Due to the high sensitivity it can also be used for the detection of mycoplasma contamination in cell cultures.Binding characteristics: reacts with all forms of native and denatured DNA; reactive also with lambda DNA and synthetic DNA.Tested cultured cell lines: XLKE-A6 (Xenopus), RVF-SMC, PTK-2, HeLa.

### Product images



Immunofluorescence analysis of HeLa cells with anti-DNA antibody. Fixation was performed using 3% paraformaldehyde for 10 min at RT. Cells were blocked with 5% BSA in PBST (PBS + 0.1% Tween 20) for 1 h at RT and permeabilized with 0.3% Triton-X 100 in PBS for 10 min at RT. The primary antibody anti-DNA mouse monoclonal, AC-30-10 (Cat. No. 690014) was diluted in blocking buffer (antibody concentration 0.5 µg/ml) and incubated over-night at 4°C. The secondary antibody goat anti-mouse IgM Alexa488 was also diluted in blocking buffer (antibody concentration 2.5 µg/ml) and incubated for 30 min at 37°C and 30 min at RT. Nuclear DNA was stained with DAPI in blue.

## References

| Publication | Species | Application |
|---|---|---|
| Dong, L. F. et al. Horizontal transfer of whole mitochondria restores tumorigenic potential in mitochondrial DNA-deficient cancer cells. Elife 6, (2017). | mouse | ICC-IF |
| Xu, J. et al. Synergistic effects of autophagy/mitophagy inhibitors and magnolol promote apoptosis and antitumor efficacy., Acta Pharm Sin B 11, 3966-3982, (2021). | human | ICC-IF |
| Hensen, F. et al. Mitochondrial RNA granules are critically dependent on mtDNA replication factors Twinkle and mtSSB. Nucleic.Acids.Res. ,  (2019) | human | ICC-IF |
| Lazarou, M. et al. The ubiquitin kinase PINK1 recruits autophagy receptors to induce mitophagy. Nature 524, 309-314 (2015). | human | ICC-IF |
| Legros, F., Malka, F., Frachon, P., Lombes, A. & Rojo, M. Organization and dynamics of human mitochondrial DNA. J. Cell Sci. 117, 2653-2662 (2004). | human | ICC-IF |