# Product datasheet

## anti-p16 Protein mouse monoclonal, DCS-50, lyophilized, purified

### Short overview

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|---|---|
| **Cat. No.** | 61074 |
| **Quantity** | 50 µg |
| **Concentration** | 50 µg/ml after reconstitution with 1 ml dist. water |

### Product description

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|---|---|
| **Host** | Mouse |
| **Antibody Type** | Monoclonal |
| **Isotype** | IgG1 |
| **Formulation** | Lyophilized; reconstitute in 1 ml dist. water (final solution contains 0.09% sodium azide, 0.5% BSA in PBS buffer, pH 7.4) |
| **UniprotID** | Q9UH64 (Human) |
| **Synomym** | Putative protein CDKN2A-DT, CDKN2A antisense RNA 1, CDKN2A antisense gene protein 1, Protein CDKN2A-AS1, Susceptibility protein NSG-x, CDKN2A-DT, C9orf53, CDKN2A-AS1 |
| **Conjugate** | Unconjugated |
| **Purification** | Affinity chromatography |
| **Storage before reconstitution** | 2-8°C until indicated expiry date |
| **Storage after reconstitution** | Up to 3 months at 2-8°C; long term storage in aliquots at -20°C; avoid freeze/thaw cycles |
| **Intended use** | Research use only |
| **Application** | ICC/IF, IHC, WB |
| **Reactivity** | Human |

### Applications

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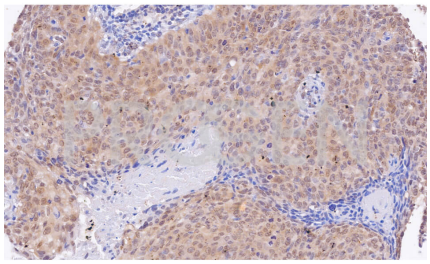
| **Immunocytochemistry (ICC)** | Assay dependent |
| **Immunohistochemistry (IHC) - paraffin** | 1:10-1:50 (1-5 µg/ml; microwave treatment recommended) |
| **Western Blot (WB)** | 1:50-1:200 (0.25 µg/ml-1 µg/ml) |

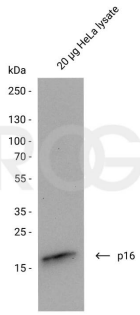
### Background

p16 (CDKN2A, p16Ink4A), is key regulator of the cell cycle and involved in cell cycle control and cellular senescence. It is a specific inhibitor for Cdk4 and Cdk6 and binds to the phosphorylated Cdk-cyclin complex. A disruption of this pathway is commonly observed in cancer. p16 is lost in the majority of tumor cell lines and in most primary tumors. It is not expressed in melanoma. In carcinoma driven by an HPV (human papilloma virus) infection, p16 is often overexpressed. The antibody is especially useful for immunoprecipitation. The epitope was localized within the 15 aa residues of the C-terminus of p16 protein.

## Product images



IHC analysis of human squamous cell carcinoma using anti-p16 antibody. IHC was performed on formalin fixed paraffin embedded sections. The samples were deparaffinized with xylol and ethanol followed by heat induced antigen retrieval with 10 mM citrate buffer. After preparation the tissue was blocked with normal serum for 20 min at RT. The primary antibody anti-p16 (Cat. No. 690074) was diluted in PBS (antibody concentration 2 µg/ml) and incubated at 4°C over-night. The secondary antibody ImmPRESS HRP anti-mouse IgG was incubated for 20 min at RT. Slides were incubated with DAB solution until a brown staining is visable and with Haemalaun for a few minutes. The 20x picture was acquired using microscopy (courtesy of J.Hess, University Hospital Heidelberg).




Western blot analysis of HeLa lysate with anti-p16 antibody. Western blot analysis was performed on 20 µg HeLa lysate. Cells were lysed with RIPA buffer. The PVDF membrane was blocked with 5% dry milk in PBST (PBS + 0.1% Tween 20) for 1 h at RT. The primary antibody anti-p16 mouse monoclonal, DCS-50 (Cat. No. 690074) was diluted in blocking buffer (antibody concentration 1 µg/ml) and incubated for 1 h at RT. The secondary antibody anti-mouse IgG goat polyclonal, HRP conjugate was also diluted in blocking buffer (antibody concentration 0.2 µg/ml) and incubated for 1 h at RT. The bands were visualized by chemiluminescent detection using PierceTM ECL Western Blotting Substrate.

## References

| Publication | Species | Application |
|---|---|---|
| Wiest, T. et al. Involvement of intact HPV16 E6/E7 gene expression in head and neck cancers with unaltered p53 status and perturbed pRb cell cycle control. Oncogene 21, 1510â€“1517 (2002). | human | IHC (paraffin) |
| Shibata, K. R. et al. Expression of the p16INK4A gene is associated closely with senescence of human mesenchymal stem cells and is potentially silenced by DNA methylation during in vitro expansion. Stem Cells 25, 2371â€“82 (2007). | human | ICC-IF |
| Lukas, J. et al. Retinoblastoma-protein-dependent cell-cycle inhibition by the tumour suppressor p16. Nature 375, 503â€“506 (1995). | human | WB,ICC-IF |