IBL Data Sheet

Code No. 11104

Anti-Human
p16 ^{INK4a} (1H4) Mouse IgG MoAb

Volume : 100 µg

Introduction : p16^{INK4a} is a cyclin-dependent kinase (CDK) inhibitor, and binds CDK4 and CDK6 and inhibits their kinase activity. It is also called MTS1 and INK4a, and p15^{INK4b} (MTS2), p18^{INK4c} and p19^{INK4d} are other members of the INK4 family. p16^{INK4a} is a tumor suppressor gene, and inactivation is seen in many cancer tissues and cancer cell lines as a result of mutations or hypermethylation. However, overexpression of p16^{INK4a} has been reported in several tumors, including cervical cancer. Infection with human papilloma virus (HPV) plays a large role in the cases of cervical cancer. Assessment of overexpression of p16^{INK4a} by immunohistochemistry methods has been shown to be more useful in research of cervical dysplasia than existing methods of detection of high-risk-group HPV infection.

Antigen : Recombinant protein of human p16

Source : Mouse-Mouse hybridoma
(X63 - Ag 8.653 × BALB/c mouse spleen cells)

Clone : 1H4 **Subclass** : IgG_1

Purification : Affinity purified with Protein A

Form : Lyophilized product from PBS containing 1 % BSA and 0.05 % NaN_3

How to use : 1.0 mL deionized water will be added to the product, then its concentration comes to 100 µg/mL

Stability : Lyophilized product, 5 years at 2 - 8 °C
: Solution, 2 years at –20 °C

Application : This antibody can be used for immunohistochemistry with formalin fixed paraffin embedded tissues after microwave treatment (10 min, 10 mM citrate buffer, pH 6.0). The recommended concentration is 5 µg/mL, however, the concentration should be optimized by each laboratory.
: This antibody can be used for western blotting in concentration of 1 µg/mL
: This antibody can be used for immuno-precipitation in concentration of 2 µg /test.

Reference

1. Sano, T., Oyama, T., Kashiwabara, K., Fukuda, T., Nakajima, T. Expression status of p16 protein is associated with human papillomavirus oncogenic potential in cervical and genital lesions. Am. J. Pathol. 153:1741-1748 1998.
2. Sano, T., Oyama, T., Kashiwabara, K., Fukuda, T., Nakajima, T. Immunohistochemical overexpression of p16 protein associated with intact retinoblastoma protein expression in cervicalcancer and cervical intraepithelial neoplasia. Pathol. Int. 48:580-585 1998.
3. Yoshida, T., Sano, T., Kanuma, T., Fukuda, T., Nakajima, T. Usefulness of Liquid-based cytology specimens for the immunocytochemical study of p16 expression and human papillomavirus testing. Cancer Cytopathol. 102:100-108 2004.

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IBL Data Sheet

Code No. 11104

Anti-Human
p16 ^{INK4a} (1H4) Mouse IgG MoAb

Volume : 10 µg

Introduction : p16^{INK4a} is a cyclin-dependent kinase (CDK) inhibitor, and binds CDK4 and CDK6 and inhibits their kinase activity. It is also called MTS1 and INK4a, and p15^{INK4b} (MTS2), p18^{INK4c} and p19^{INK4d} are other members of the INK4 family. p16^{INK4a} is a tumor suppressor gene, and inactivation is seen in many cancer tissues and cancer cell lines as a result of mutations or hypermethylation. However, overexpression of p16^{INK4a} has been reported in several tumors, including cervical cancer. Infection with human papilloma virus (HPV) plays a large role in the cases of cervical cancer. Assessment of overexpression of p16^{INK4a} by immunohistochemistry methods has been shown to be more useful in research of cervical dysplasia than existing methods of detection of high-risk-group HPV infection.

Antigen : Recombinant protein of human p16

Source : Mouse-Mouse hybridoma
(X63 - Ag 8.653 × BALB/c mouse spleen cells)

Clone : 1H4 **Subclass** : IgG_1

Purification : Affinity purified with Protein A

Form : Lyophilized product from PBS containing 1 % BSA and 0.05 % NaN_3

How to use : 0.1 mL deionized water will be added to the product, then its concentration comes to 100 µg/mL

Stability : Lyophilized product, 5 years at 2 - 8 °C
: Solution, 2 years at –20 °C

Application : This antibody can be used for immunohistochemistry with formalin fixed paraffin embedded tissues after microwave treatment (10 min, 10 mM citrate buffer, pH 6.0). The recommended concentration is 5 µg/mL, however, the concentration should be optimized by each laboratory.
: This antibody can be used for western blotting in concentration of 1 µg/mL
: This antibody can be used for immuno-precipitation in concentration of 2 µg /test.

Reference

1. Sano, T., Oyama, T., Kashiwabara, K., Fukuda, T., Nakajima, T. Expression status of p16 protein is associated with human papillomavirus oncogenic potential in cervical and genital lesions. Am. J. Pathol. 153:1741-1748 1998.
2. Sano, T., Oyama, T., Kashiwabara, K., Fukuda, T., Nakajima, T. Immunohistochemical overexpression of p16 protein associated with intact retinoblastoma protein expression in cervicalcancer and cervical intraepithelial neoplasia. Pathol. Int. 48:580-585 1998.
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