Thermo SCIENTIFIC

DATA SHEET
Rev 041907G

p21^{WAF1} (Anti-Mouse) Ab-9

Rabbit Polyclonal Antibody

Cat. #RB-032-P0, -P1, or -P (0.1ml, 0.5ml, or 1.0ml at 1.0mg/ml) (Purified Ab with BSA and Azide)
Cat. #RB-032-P1ABX or -PABX (0.5ml or 1.0ml at 1.0mg/ml) (Purified Ab without BSA and Azide)
Cat. #RB-032-R7 (7.0ml) (Ready-to-Use for Immunohistochemical Staining)
Cat. #RB-032-PCS (5 Slides) (Positive Control for Histology)

Description: p21^{WAF1}/*Cip1*/Sdi1/Pic1 is a tumor suppressor protein. Expression of p21^{WAF1} is induced by wild type, but not mutant, p53 suppressor protein. The p21^{WAF1} protein binds to cyclin/CDK complexes and inhibits their kinase activity thereby stopping cell cycle progression. Meanwhile, the p21^{WAF1} protein also binds to PCNA (proliferating cell nuclear antigen) and blocks DNA replication but not the DNA repair process. Evidently, inactivation of p53 disrupts the p53-dependent expression of p21^{WAF1}. p21^{WAF1}is a tumor suppressor involved in the pathogenesis of a variety of malignancies.

Comments: Ab-9 is particularly designed for research on MOUSE p21^{WAF1} protein.

Mol. Wt. of Antigen: 21kDa

Epitope: aa 2-14

Species Reactivity: Mouse and Rat. Does not react with human. Others-not known.

Immunogen: A synthetic peptide corresponding to aa 2-14 (SNPGDVR-PVPHRSK) from the N-terminus of MOUSE p21^{WAF1}.

Applications and Suggested Dilutions:

- Immunoprecipitation (Native and denatured) (Use Protein A) (Ab 10µg/mg protein lysate) (Co-precipitates cdk4)
- Kinase Assay
- Western Blotting (Not suitable)
- Immunohistology (Formalin/paraffin) (Ab 1:20 for 60 min at RT)

* [Staining of formalin-fixed tissues REQUIRES boiling tissue sections in 10mM citrate buffer, pH 6.0, (***NEOMARKERS'*** Cat. #AP-9003), for 10-20 min followed by cooling at RT for 20 min.]

The optimal dilution for a specific application under a given set of experimental conditions should be determined by the investigator.

Cellular Localization: Nuclear

Positive Control: NIH3T3 or MAD109 cells. Colon

Supplied As: Total IgG purified from rabbit anti-serum by Protein A chromatography. Prepared at 1mg/ml in 10mM PBS, pH 7.4, with 0.2% BSA & 0.09% sodium azide. Also available without BSA and azide at 1mg/ml, **or** Prediluted antibody which is ready-to-use for staining of formalin-fixed, paraffin-embedded tissues.

Storage and Stability:

Ab with sodium azide is stable for 24 months when stored at 2-8°C. Antibody WITHOUT sodium azide is stable for 36 months when stored at below 0°C.

Suggested References:

1. Buckley M.F., et al. Oncogene. 8: 2127, 1993.
2. Chen Y. Q., et al. Int. J. Oncology, 889, 1995a.
3. Chen, J., et al. Nature 374:1995b.

Limitations and Warranty:

Our products are intended FOR RESEARCH USE ONLY and are not approved for clinical diagnosis, drug use or therapeutic procedures. No products are to be construed as a recommendation for use in violation of any patents. NeoMarkers makes no representations, warranties or assurances as to the accuracy or completeness of information provided on our data sheets and website. Our warranty is limited to the price paid for the product. NeoMarkers is not liable for any property damage, personal injury, time or effort or economic loss caused by our products.

Material Safety Data:

This product is not licensed or approved for administration to humans or to animals other than the experimental animals. Standard Laboratory Practices should be followed when handling this material. The chemical, physical, and toxicological properties of this material have not been thoroughly investigated. Appropriate measures should be taken to avoid skin and eye contact, inhalation, and ingestion. The material contains 0.09% sodium azide as a preservative. Although the quantity of azide is very small, appropriate care should be taken when handling this material as indicated above. The National Institute of Occupational Safety and Health has issued a bulletin citing the potential explosion hazard due to the reaction of sodium azide with copper, lead, brass, or solder in the plumbing systems. Sodium azide forms hydrazoic acid in acidic conditions and should be discarded in a large volume of running water to avoid deposits forming in metal drainage pipes.

For Research Use Only

Additional Suggested references:

1. Chen, Y. Q., Cipriano, S. C., Arenkiel, J. M., Miller, F. R. Tumor suppression by p21WAF1. Cancer Res. 55: 4536-4539, 1995c.

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2. Deng, C., Zhang, P., Harper, W. J., Elledge, S. J., Leder, P. Mice lacking p21CIP1/WAF1 undergo normal development, but are defective in G1 checkpoint control. Cell 82: 675-684, 1995.
3. el-Deiry, W. S., Tokino, T., Waldman, T., Oliner, J. D., Velculescu, V. E., Burrell, M., Hill, D. E., Healy, E., Rees, J. L., Hamilton, S. R., Kinzler, W., Vogelstein, B. Topological control of p21WAF1 expression in normal and neoplastic tissue. Cancer Res. 55: 2910-2919, 1995.
4. el-Deiry, W.S., Harper, J.W., O'Connor, P.M., Velculescu, V.E., Canman,C.E., Jackman, J., Pietenpol, J.A., Burrell, M., Hill, D.E., Wang, Y., Wiman, K.G., Mercer, W.E., Kastan, M.B., Kohn, K.W., Elledge, S.J., Kinzler, K.W., and Vogelstein, B. WAF1/CIP1 is induced in p53-mediated G1 arrest and apoptosis. Cancer Res., 54: 1169-1174, 1994.
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