ProductInformation

MONOCLONAL ANTI-p19^{ARF}
CLONE lab07
Purified Mouse Immunoglobulin

Product Number **P 3985**

Product Description

Monoclonal Anti-p19^{ARF} (mouse IgG1 isotype) is produced by immunizing mice with purified recombinant full length mouse p19^{ARF} as the immunogen.

Monoclonal Anti-p19^{ARF} recognizes mouse p19^{ARF} by immunoblotting.

The *INK4a/ARF* locus encodes two unrelated tumor suppressor proteins,[1, 2] p16^{INK4a} and p19^{ARF} that restrain cell growth by modifying the functions of the retinoblastoma protein and p53, respectively.[3] It is among the most frequently mutated tumor suppressor loci in human cancer. Both p16^{INK4a} and p19^{ARF} act as cell proliferation inhibitors.[4] The *ARF* gene, p19^{ARF} in mouse and p14^{ARF} in human, has become an important player in cell cycle regulation.

In mice, tumor suppressor effects appear to be mediated by interactions between p19^{ARF} and the p53 tumor-suppressor protein. p19^{ARF} counters uncontrolled proliferation and oncogenic signals in p53-dependent pathways.[5, 6] Proteins encoded by the *INK4a/ARF* locus also play a role in Abelson virus transformation. Both p16^{INK4a} and p19^{ARF} are expressed in many cells as they emerge from the apoptotic crisis that characterizes the transformation process. Expression of p19^{ARF} but not p16^{INK4a} induces apoptosis in Ab-MLV-transformed pre-B cells. INK4a/ARF expression correlates with or precedes the emergence of cells expressing mutant p53. p19^{ARF} is an important part in cellular defense against transforming signals from the Abl oncoprotein, providing direct evidence that the p19^{ARF}-p53 regulatory loop plays an important role in lymphoma induction.

Reagent

Monoclonal Anti-p19^{ARF} is supplied as 1 mg/ml of antiserum in phosphate buffered saline, pH 7.4, containing 0.08 % sodium azide.

Storage/Stability

For continuous use, store at 2 °C to 8 °C for up to one month. For extended storage, freeze in working aliquots at –20 °C. Avoid repeated freezing and thawing. Do not store in a frost-free freezer. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Product Profile

For immunoblotting, a working concentration of 2.0 to 10 µg/ml antibody is recommended. A band of approximately 19 kDa is detected.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentrations by titration test.

References

1. Serrano, M., et al., Nature, **366**, 704-707 (1993).
2. Quelle, D.E., et al., Cell, **83**, 993-1000 (1995).
3. Kamijo, T., et al., Proc. Natl. Acad. Sci. USA, **95**, 8292-8297 (1998).
4. Larson, C.J., et al., Bull. Cancer, **85**, 304-306 (1998).
5. De Stanchina, E., et al., Genes Dev., **12**, 2434-2442 (1998).
6. Zindy, F., et al., Genes Dev., **12**, 2424-2433 (1998).

KAA 06/01