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Product Information

Monoclonal Anti-GRAMD4, clone GR4-1
produced in mouse, purified immunoglobulin

Catalog Number **SAB4200634**

Product Description

Monoclonal Anti-GRAMD4 (mouse IgG1 isotype) is derived from the hybridoma GR4-1 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with a synthetic peptide corresponding to a sequence at the N-terminal region of human GRAMD4 (GeneID: 23151), conjugated to KLH. The corresponding sequence is identical in monkey, differs by a single amino acid in rat and by 2 amino acids in mouse GRAMD4. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2. The antibody is purified from culture supernatant of hybridoma cells grown in a bioreactor.

Monoclonal Anti-GRAMD4 recognizes human and monkey GRAMD4. The product may be used in several immunochemical techniques including immunoblotting (~80 kDa), immunocytochemistry and flow cytometry. Detection of the GRAMD4 band by immunoblotting is specifically inhibited by the immunizing peptide.

GRAMD4 (GRAM domain containing 4) also known as DIP (Death-inducing protein), is a novel p53-independent pro-apoptotic target of E2F1, which localizes to the nucleus. Upregulation of GRAMD4 by E2F1 activation or GRAMD4 overexpression leads to enhanced apoptosis in various tumor cells and karyotypically normal fibroblasts. GRAMD4 translocation to the mitochondria is mediated by p73-induced apoptosis. It interacts with Bcl-2, promotes Bax mitochondrial relocalization and oligomerization, and is highly efficient in inducing mitochondrial membrane permeabilization with release of cytochrome *c* and Smac.[1-2] Interestingly, GRAMD4 overexpression was found to inhibit tumor growth. Its efficacy was more pronounced over time when combined with cisplatin, leading to prolonged growth retardation.[1]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.
Antibody Concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For extended storage, freeze at –20 °C in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. 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.

Product Profile

Immunoblotting: a working concentration of 0.5-1 µg/mL is recommended using whole extracts of Jurkat cells.

Immunofluorescence: a working concentration of 2-4 µg/mL is recommended using HeLa cells.

Flow Cytometry: a working dilution of 2.5-5.0 µg/test is recommended using HeLa cells.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

1. John, K., et al., *Cell Death Differ.*, **18**, 874–886 (2011).
2. Stanelle, J., et al., *Cell Death Differ.*, **12**, 347-357 (2005).

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