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ProductInformation

MONOCLONAL ANTI-CERAMIDE
Purified Mouse Immunoglobulin,
Clone MID 15B4

Product Number **C8104**

Product Description

Monoclonal Anti-Ceramide (mouse IgM isotype) is derived from the hybridoma produced by the fusion of mouse myeloma cells and splenocytes from a BALB/c mouse immunized with ceramide conjugated to bovine serum albumin The antibody was purified from ascites fluid by gel filtration using sephacryl S-300 resin. Monoclonal Anti-Ceramide recognizes ceramides by ELISA. The antibody was characterized on ceramide covalently bound to myoglobin.

Ceramide is an endogenous lipid component of a novel biochemical pathway termed the sphingomyelin pathway.[1,2,3] The sphingomyelin cycle was discovered in human leukemia HL-60 cells[1,2] which are activated during differentiation induced with 1-α-25-dihydroxy-vitamin D3. Ceramide is generated by hydrolysis of membrane sphingomyelin by a unique magnesium-independent, neutral, cytosolic sphingomyelinase.[4] The use of cell permeable synthetic ceramide has been shown to produce a similar dose dependent induction of differentiation of HL-60 cells.[4] Other synthetic analogs such as C-6 ceramide have been found useful in the study of cell responses.[5] Ceramide is generated in response to cellular stimulation by hormones, cytokines and antigens.[5,6,7,8,9,10] Mechanisms for ceramide action involve regulation of protein phosphorylation via stimulation of a serine/threonine protein phosphatase, a proline-directed kinase and possibly other direct and/or indirect targets.[7] Ceramide metabolites such as sphingosine and sphingosine-1-phosphate have potent biological activities of their own.[6]

Ceramide appears to have a role in mediating biological responses in a wide variety of cell types.[7] Ceramide is emerging as an intracellular messenger than mediates effects on terminal differentiation and cell proliferation as well as apoptosis or cell death and cell-cycle arrest.[9,11] The interrelationship of ceramide actions with other bioactive lipids and systems represents an area of active research.

Reagents

Monoclonal Anti-Ceramide is supplied as purified mouse IgM at 200 µg/ml in phosphate buffered saline containing 0.5M NaCl, 0.1% bovine serum albumin and 0.09% sodium azide.

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

Storage/Stability

Store at 2-8°C. Do not freeze the antibody. 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

The recommended working dilution is 1:10 for ELISA.

Note: In order to obtain best results and assay sensitivities of different techniques and preparations, we recommend determining optimal working dilutions by titration test.

References

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