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ProductInformation

Monoclonal Anti-Integrin αV (CD51),
Clone P2W7
Tissue Culture Supernatant

Product Number **I 3783**

Product Description

Monoclonal Anti-Human Integrin αV (mouse IgG1, kappa isotype) is derived from the P2W7 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from a mouse immunized with an ocular melanoma cell line expressing high levels of human integrin $\alpha_V\beta_2$. The antibody is Protein A purified from tissue culture supernatant.

Monoclonal Anti-Human Integrin αV is specific for human integrin αV (160 kDa). The antibody may be used in flow cytometry.

Integrins are important extracellular matrix (ECM) receptor proteins located on cell surfaces. They are hetrodimers composed of an alpha and a beta transmembrane glycoprotein subunit. Around twenty-two different integrins (different alpha/ beta subunit combinations) are found in nature. Integrins are generally present in high concentrations at the cell surface, but, unlike most other cell-surface receptors, they bind ligands with very low affinity. Due to their weak individual binding, integrins need to cluster and bind in-groups in order to effectively bind the ECM. Integrins bind many different ligands including laminin. Each integrin is made up of a large N-terminal extracellular domain that binds the ECM ligand and a small C-terminal cytoplasmic domain that mediates interaction with the actin cytoskeleton and signaling function.[1]

A subset of integrins contains the vitronectin α subunit receptor, α_V. Alpha V integrins serve as receptors for extracellular matrix proteins and can interact with ligands through the arginine-glycine-aspartic acid (RGD) recognition motif. The alpha V subunit can be associated with different bete subunits, including β_1, β_3, β_5, β_6, and β_8.[2, 3]

Reagents

Monoclonal Anti-Human Integrin αV is supplied in a buffer of 50 mM sodium phosphate, pH 7.5, 100 mM potassium chloride, 150 mM sodium chloride, and 0.5 mg/ml gentamicin sulfate as a preservative.

Concentration: 1.0 mg/ml

Storage/Stability

Store at 2-8 °C. Freeze/thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use.

Procedure

Flow Cytometry
To each tube, add 5 x 10^5 washed cultured UM-SCC (squamous cell carcinoma) cells. Add 20 µl of human IgG (250 µg/ml) to each tube and incubate for 5 minutes to block nonspecific binding. Then add 80 µl of the antibody at 10 µg/ml and incubate on ice for 45 minutes. At the end of the incubation, wash the cells twice. Add a secondary reagent such as goat anti-mouse IgG/FITC and incubate for 30-45 minutes. After the secondary incubation, wash the mixture three times, fix, and analyze in a flow cytometer.

Product Profile

For flow cytometry, a working antibody concentration of 10 µg/ml (80 µl/tube) is recommended.

Note: In order to obtain the best results and assay sensitivity in various techniques and preparations, we recommend determining the optimal working dilution by titration.

References

1. Chan, B. M., et al., Cell, **68**, 1051 (1992).
2. Bossy, B., and Reichardt, L.F., Biochem., **29,** 10191 (1990).
3. Rajaraman, R., Exp. Cell Res., **205**, 25 (1993).

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