

Product Information

MONOCLONAL ANTI- β -1-CHICKEN INTEGRIN

Clone W1B10

Purified Immunoglobulin

Product Number I 8638

Product Description

Monoclonal anti- β -1-Chicken Integrin (mouse IgG1 isotype) is derived from the W1B10 hybridoma¹ produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with purified chicken integrin from fibroblasts of 11 day old chicken embryos. The isotype is determined using Sigma ImmunoType™ Kit (Product Code ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Product Code ISO-2).

Monoclonal anti- β -1-Chicken Integrin recognizes an epitope on the extracellular side of the avian integrin complex. Clone W1B10 inhibits adhesion of embryo and tendon fibroblasts as well as skeletal myoblasts to both laminin and fibronectin. Using immunoprecipitation techniques with the ³⁵S-labeled extracts of chicken embryo muscle cells the antibody precipitates the integrin complex. When run on SDS-PAGE under reducing and denaturing conditions, the precipitant appears as a broad band in the molecular weight range of 140 kDa. Using a Western blotting technique from gels run on SDS-PAGE under non-reducing conditions this clone localizes the integrin β -1 subunit bands of 100 kD (immature form) and 110 kDa (mature form) along with bands around 140 kDa (non-covalently associated α subunits). W1B10 is a monoclonal antibody probe that recognizes the avian integrin, a cell surface receptor for extracellular matrix (ECM) molecules like fibronectin, laminin, vitronectin and collagen types I and IV.¹ Clone W1B10, as a second generation integrin monoclonal antibody, recognizes the avian integrin complex.

Chicken integrin is a heterodimer consisting of the common β -1 subunit and two α subunits (α -5 or α -3). Integrin binding to ECM ligands regulates cell adhesion, shape, motility, intracellular signalling and gene expression.² The β -1 subunit of chicken integrin is a 803-amino acid transmembrane glycoprotein consisting of a large extracellular domain and a short cytoplasmic domain.³ The monoclonal anti- β -1 chicken integrin antibody (clone W1B10) has been used to inhibit chicken muscle cell adhesion in cell cultures.^{4,5}

Reagents

The product is provided as (Protein A) purified antibody in 0.01M phosphate buffered saline pH 7.4, containing 1% BSA and 0.1% sodium azide (see MSDS)* as a preservative.

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 hazards and safe handling practices.

Storage/Stability

For extended storage, freeze in working aliquots. For continuous use, store at 2-8 °C for up to one month. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use.

Product Profile

The antibody titer (minimum 1:200) was determined by immunoblotting, using denatured non-reduced extract of cultured fibroblasts from chicken embryo lower leg.

In order to obtain best results in different techniques and preparations, it is recommended that each individual user determine their optimum working dilutions by titration assay.

References

1. Buck, C., and Horwitz, A.F., *Ann. Rev. Cell Biol.*, **3**, 179 (1987).
2. Springer, T.A., *Nature*, **346**, 425 (1990).
3. Tamkun, J.W., et al., *Cell*, **46**, 271 (1986).
4. Horwitz, A.F., et al., *J. Cell Biol.*, **101**, 2134 (1985).
5. Hayashi, Y., et al., *J. Cell Biol.*, **110**, 175 (1990).
6. Neugebauer, K.M., and Reichardt, L.F., *Nature*, **350**, 68 (1991).

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