

Product Information

Anti-Talin antibody, Mouse monoclonal
clone 8D4, purified from hybridoma cell culture

Product Number **SAB4200694**

Product Description

Anti-Talin antibody, Mouse monoclonal, (mouse IgG1 isotype) is derived from the hybridoma 8D4 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with purified cytoskeletal Talin, from chicken gizzard.¹ The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2. The antibody is purified from culture supernatant of hybridoma cells.

Anti-Talin antibody, Mouse monoclonal recognizes mammalian (human², bovine³, sheep³, rat¹ and hamster), avian (chicken) and amphibian¹ (Xenopus), but not fish Talin.¹ The antibody may be used in various immunochemical techniques including Immunoblotting, Immunofluorescence, FACS⁴ and ELISA⁵. In Immunoblotting the antibody recognizes the intact Talin molecule (chicken-225 kDa; mammalian-235 kDa). Monoclonal Anti-Talin recognizes the 190 kDa actin-binding fragment of protease cleaved Talin, but not the 47 kDa fragment. In Immunofluorescence on fibroblasts cells, the antibody stains focal adhesions³, membrane ruffles, and ventral streaks.¹

Talin is a high molecular weight cytoplasmic adapter protein which is essential for integrin-mediated adhesion to the extracellular matrix (ECM). Talin links the actin cytoskeleton to integrins at the plasma membrane⁶⁻⁷ and presents in a variety of tissues and cell types. It is localized at a subset of adherens junctions, specialized cell-cell and cell-matrix associations that are characterized by the presence of filamentous actin at the cytoplasmic face of the junctional complex. In cultured cells, Talin is absent from cell-cell junctions and found predominantly at adhesion plaques and in fibrillar streaks underlying cell surface fibronectin.^{1,8-9} Talin contains multiple binding sites for the cytoskeletal protein vinculin,^{6,9} which is recruited to adhesion sites by Talin reinforcing the link to the actin cytoskeleton.

Talin contains an N-terminal FERM domain (the head) linked to a flexible rod comprised of 13 amphipathic helical bundles and a C-terminal helix (DD) that forms an anti-parallel dimer.¹⁰ It may be found either as monomer or dimer. Talin is considered as a mechanosensor, undergoing a progressive

mechanoresponse to the varying forces exerted throughout adhesion and migration, such as conformational changes, disrupted or exposed ligand binding sites and exposing hidden protease cleavage sites.⁷

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 continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing 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 1-2 µg/mL is recommended using whole extract of hamster CHO cells.

Immunofluorescence: a working concentration of 2.5-5 µg/mL is recommended using chicken UMNSAH/DF1 cells.

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

References

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