SANTA CRUZ BIOTECHNOLOGY, INC.

Integrin α10 (E-15): sc-161740

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Integrin α10 (integrin α-10/β-1) is a member of the integrin α chain family that contains seven FG-GAP repeats and one VWFA domain. Integrin α10 is single-pass type 1 membrane protein and is expressed as a hetero-dimer of an α and a β subunit. Integrin α10 is a widely expressed protein with highest expression found in muscle and heart tissue but is also found in articular cartilage. The α10 subunit is part of a collagen type II-binding integrin found in chondrocytes. Disruption of Integrin α10 expression will lead to growth retardation and defects in the growth plate, and is characterized by a disturbed arrangement of chondrocytes, abnormal chondrocyte shape and reduced chondrocyte proliferation. AP-2ε and Ets-1 have been shown to be involved in the regulation of Integrin α10 transcription in chondrocytes. Integrin α10 is upregulated in malignant melanoma cell lines.

REFERENCES

1. Lehnert, K., Ni, J., Leung, E., Gough, S., Morris, C.M., Liu, D., Wang, S.X., Langley, R. and Krissansen, G.W. 1999. The Integrin α10 subunit: expression pattern, partial gene structure, and chromosomal localization. Cytogenet. Cell Genet. 87: 238-244.
2. Bengtsson, T., Camper, L., Schneller, M. and Lundgren-Akerlund, E. 2001. Characterization of the mouse integrin subunit α10 gene and comparison with its human homologue. Genomic structure, chromosomal localization and identification of splice variants. Matrix Biol. 20: 565-576.
3. Gullberg, D.E. and Lundgren-Akerlund, E. 2002. Collagen-binding I domain integrins—what do they do? Prog. Histochem. Cytochem. 37: 3-54.
4. Bengtsson, T., Aszodi, A., Nicolae, C., Hunziker, E.B., Lundgren-Akerlund, E. and Fässler, R. 2005. Loss of α10/β1 integrin expression leads to moderate dysfunction of growth plate chondrocytes. J. Cell Sci. 118: 929-936.
5. Wenke, A.K., Rothhammer, T., Moser, M. and Bosserhoff, A.K. 2006. Regulation of Integrin α10 expression in chondrocytes by the transcription factors AP-2ε and Ets-1. Biochem. Biophys. Res. Commun. 345: 495-501.

CHROMOSOMAL LOCATION

Genetic locus: ITGA10 (human) mapping to 1q21.1; Itga10 (mouse) mapping to 3 F2.1.

SOURCE

Integrin α10 (E-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of Integrin α10 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-161740 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

Integrin α10 (E-15) is recommended for detection of Integrin α10 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other Integrin α family members.

Integrin α10 (E-15) is also recommended for detection of Integrin α10 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Integrin α10 siRNA (h): sc-88849, Integrin α10 siRNA (m): sc-146246, Integrin α10 shRNA Plasmid (h): sc-88849-SH, Integrin α10 shRNA Plasmid (m): sc-146246-SH, Integrin α10 shRNA (h) Lentiviral Particles: sc-88849-V and Integrin α10 shRNA (m) Lentiviral Particles: sc-146246-V.

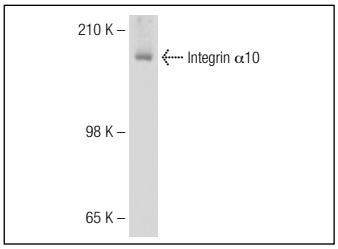
Molecular Weight of Integrin α10: 130 kDa.

Positive Controls: Mouse heart extract: sc-2254.

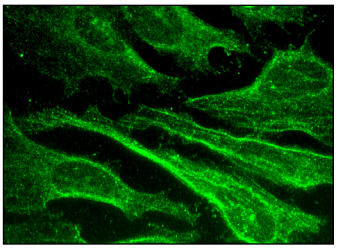
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Integrin α10 (E-15): sc-161740. Western blot analysis of Integrin α10 expression in mouse heart tissue extract.



Integrin α10 (E-15): sc-161740. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.