SANTA CRUZ BIOTECHNOLOGY, INC.

β ig-h3 (P-20): sc-14743

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Human β ig-h3 (α3/β1 Integrin, keratoepithelin) is a secreted, 683-amino acid, transforming growth factor-inducible, extracellular matrix adhesion molecule. β ig-h3 contains an amino-terminal secretory sequence and a carboxy-terminal Integrin-binding Arg-Gly-Asp (RGD) domain. β ig-h3 is implicated in mechanisms leading to proliferation, differentiation, wound healing and morphogenesis of corneal tissues. Mutations in the β ig-h3 gene, along with elevated levels of β ig-h3 protein in human corneas, occurs with granular dystrophy (GCD) and other inherited disorders of the cornea. β ig-h3 is also a structural component of the human bladder extracellular matrix and may influence nuclear regulatory or structural functions.

REFERENCES

1. Skonier, J., et al. 1992. cDNA cloning and sequence analysis of β ig-h3, a novel gene induced in a human adenocarcinoma cell line after treatment with transforming growth factor-β. DNA Cell Biol. 11: 511-522.
2. LeBaron, R.G., et al. 1995. β ig-h3, a novel secretory protein inducible by transforming growth factor-β, is present in normal skin and promotes the adhesion and spreading of dermal fibroblasts *in vitro*. J. Invest. Dermatol. 104: 844-849.
3. Rawe, I.M., et al. 1997. β-ig. molecular cloning and *in situ* hybridization in corneal tissues. Invest. Ophthalmol. Vis. Sci. 38: 893-900.
4. Tsujikawa, M., et al. 1998. Novel polymorphisms in the β ig-h3 gene. J. Hum. Genet. 43: 214-225.
5. Bron, A.J. 2000. Genetics of the corneal dystrophies: what we have learned in the past twenty-five years. Cornea 19: 699-711.
6. Billings, P.C., et al. 2000. Extracellular matrix and nuclear localization of β ig-h3 in human bladder smooth muscle and Fibroblast cells. J. Cell. Biochem. 79: 261-273.

CHROMOSOMAL LOCATION

Genetic locus: TGFBI (human) mapping to 5q31.1; Tgfbi (mouse) mapping to 13 B1.

SOURCE

β ig-h3 (P-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of β ig-h3 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-14743 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

β ig-h3 (P-20) is recommended for detection of β ig-h3 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).

β ig-h3 (P-20) is also recommended for detection of β ig-h3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for β ig-h3 siRNA (h): sc-43123, β ig-h3 siRNA (m): sc-43124, β ig-h3 shRNA Plasmid (h): sc-43123-SH, β ig-h3 shRNA Plasmid (m): sc-43124-SH, β ig-h3 shRNA (h) Lentiviral Particles: sc-43123-V and β ig-h3 shRNA (m) Lentiviral Particles: sc-43124-V.

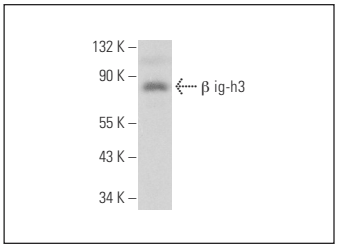
Molecular Weight of β ig-h3: 68 kDa.

Positive Controls: Y79 cell lysate: sc-2240 or A549 cell lysate: sc-2413.

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



β ig-h3 (P-20): sc-14743. Western blot analysis of β ig-h3 expression in A549 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Calamia, V., et al. 2011. Metabolic labeling of chondrocytes for the quantitative analysis of the interleukin-1-β-mediated modulation of their intracellular and extracellular proteomes. J. Proteome Res. 10: 3701-3711.

RESEARCH USE

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