

β ig-h3 (E-19): sc-14742

BACKGROUND

Human β ig-h3 ($\alpha 3/\beta 1$ 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

- 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.
- 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.
- Rawe, I.M., et al. 1997. β -ig. molecular cloning and *in situ* hybridization in corneal tissues. *Invest. Ophthalmol. Vis. Sci.* 38: 893-900.
- Tsujikawa, M., et al. 1998. Novel polymorphisms in the β ig-h3 gene. *J. Hum. Genet.* 43: 214-225.

CHROMOSOMAL LOCATION

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

SOURCE

β ig-h3 (E-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of β ig-h3 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-14742 P, (100 μ g 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.

RESEARCH USE

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

PROTOCOLS

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

APPLICATIONS

β ig-h3 (E-19) 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 μ g per 100-500 μ g 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 (E-19) is also recommended for detection of β ig-h3 in additional species, including equine, canine, bovine, porcine and avian.

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.

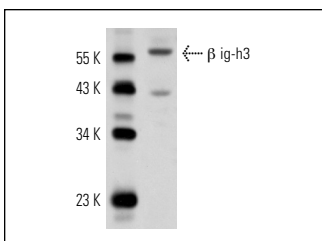
Molecular Weight of β ig-h3: 68 kDa.

Positive Controls: Y79 cell lysate: sc-2240.

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 (E-19): sc-14742. Western blot analysis of β ig-h3 expression in Y79 whole cell lysate.

SELECT PRODUCT CITATIONS

- Cha, J., et al. 2008. Fibroblasts from non-healing human chronic wounds show decreased expression of β ig-h3, a TGF- β inducible protein. *J. Dermatol. Sci.* 50: 15-23.
- Liu, C., et al. 2011. MiR-21 plays an important role in radiation induced carcinogenesis in BALB/c mice by directly targeting the tumor suppressor gene β ig-h3. *Int. J. Biol. Sci.* 7: 347-363.
- Turtoi, A., et al. 2013. Organized proteomic heterogeneity in colorectal cancer liver metastases and implications for therapies. *Hepatology*. E-published.