SANTA CRUZ BIOTECHNOLOGY, INC.

HIG2 (G-2): sc-376704

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

Cell growth and viability is compromised by oxygen deprivation (hypoxia). HIG2 (hypoxia-inducible gene 2 protein), also known as HIG-2 or C7orf68, is a 63 amino acid single-pass membrane protein that can be hypoxia induced by glucose deprivation. Expression of HIG2 is increased in cervical cancer cells but inhibited in renal cell carcinoma. When bound to the extracellular domain of frizzled-10, HIG2 enhances oncogenic Wnt signaling and its own transcription, which suggests HIG2 may function as an autocrine growth factor. HIG2 may be a candidate for development of molecular-targeting therapy and could serve as a prominent diagnostic tumor marker for patients with renal carcinomas. The gene encoding HIG2 maps to human chromosome 7, which houses over 1,000 genes and comprises nearly 5% of the human genome. Defects in some of the genes localized to chromosome 7 have been linked to osteogenesis imperfecta, Williams-Beuren syndrome, Pendred syndrome, Lissencephaly, Citrullinemia and Shwachman-Diamond syndrome.

CHROMOSOMAL LOCATION

Genetic locus: HILPDA (human) mapping to 7q32.1; Hilpda (mouse) mapping to 6 A3.3.

SOURCE

HIG2 (G-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 39-61 at the C-terminus of HIG2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_3 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-376704 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

HIG2 (G-2) is recommended for detection of HIG2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for HIG2 siRNA (h): sc-89360, HIG2 siRNA (m): sc-145960, HIG2 shRNA Plasmid (h): sc-89360-SH, HIG2 shRNA Plasmid (m): sc-145960-SH, HIG2 shRNA (h) Lentiviral Particles: sc-89360-V and HIG2 shRNA (m) Lentiviral Particles: sc-145960-V.

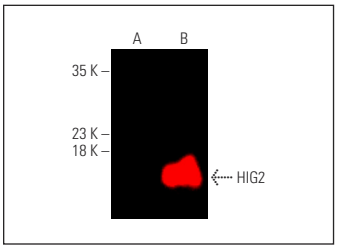
Molecular Weight of HIG2: 7 kDa.

Positive Controls: PC-3 cell lysate: sc-2220, mouse thyroid extract: sc-2407 or SK-N-MC cell lysate: sc-2237.

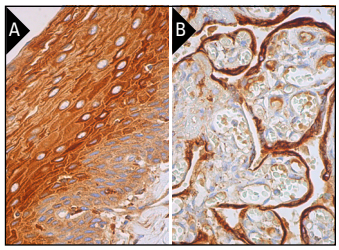
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



HIG2 (G-2): sc-376704. Near-Infrared western blot analysis of HIG2 expression in non-transfected 293T (**A**) and human HIG2 transfected 293T (**B**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG_3 BP-CFL 790: sc-533678.



HIG2 (G-2): sc-376704. Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing cytoplasmic staining of squamous epithelial cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of trophoblastic cells (**B**).

SELECT PRODUCT CITATIONS

1. Mains, R.E., et al. 2018. Changes in corticotrope gene expression upon increased expression of peptidylglycine α-amidating monooxygenase. Endocrinology 159: 2621-2639.
2. Wu, H., et al. 2019. Evidence for a novel regulatory interaction involving cyclin D1, lipid droplets, lipolysis, and cell cycle progression in hepatocytes. Hepatol. Commun. 3: 406-422.

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 for detailed protocols and support products.