

# HIG2 (E-12): sc-137519

## 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.

## REFERENCES

1. Liang, H., et al. 1998. Molecular anatomy of chromosome 7q deletions in myeloid neoplasms: evidence for multiple critical loci. *Proc. Natl. Acad. Sci. USA* 95: 3781-3785.
2. Denko, N., et al. 2000. Epigenetic regulation of gene expression in cervical cancer cells by the tumor microenvironment. *Clin. Cancer Res.* 6: 480-487.
3. Hillier, L.W., et al. 2003. The DNA sequence of human chromosome 7. *Nature* 424: 157-164.
4. Togashi, A., et al. 2005. Hypoxia-inducible protein 2 (HIG2), a novel diagnostic marker for renal cell carcinoma and potential target for molecular therapy. *Cancer Res.* 65: 4817-4826.
5. Bray, J.D., et al. 2005. Quantitative analysis of gene regulation by seven clinically relevant progestins suggests a highly similar mechanism of action through progesterone receptors in T47D breast cancer cells. *J. Steroid Biochem. Mol. Biol.* 97: 328-341.
6. Arai, T., et al. 2006. ZD6474 inhibits tumor growth and intraperitoneal dissemination in a highly metastatic orthotopic gastric cancer model. *Int. J. Cancer* 118: 483-489.

## CHROMOSOMAL LOCATION

Genetic locus: C7orf68 (human) mapping to 7q32.1.

## SOURCE

HIG2 (E-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of HIG2 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-137519 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

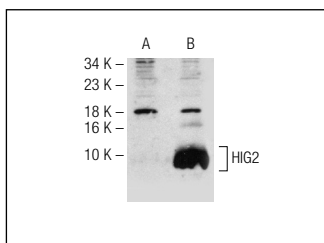
HIG2 (E-12) is recommended for detection of HIG2 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid 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 shRNA Plasmid (h): sc-89360-SH and HIG2 shRNA (h) Lentiviral Particles: sc-89360-V.

Molecular Weight of HIG2: 7 kDa.

Positive Controls: PC-3 cell lysate: sc-2220, SK-N-MC cell lysate: sc-2237 or ES-2 cell lysate: sc-24674.

## DATA



HIG2 (E-12): sc-137519. Western blot analysis of HIG2 expression in non-transfected: sc-117752 (A) and mouse HIG2 transfected: sc-120779 (B) 293T whole cell lysates.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **HIG2 (G-2): sc-376704**, our highly recommended monoclonal alternative to HIG2 (E-12).