

# GRHL3 (G-15): sc-131537

## BACKGROUND

The grainyhead subfamily, whose members include GRHL1, GRHL2 and GRHL3, consist of orthologs of the *Drosophila* grainyhead (*grh*) gene. In *Drosophila*, *grh* is involved in early dorsal/ventral patterning and tissue development. The grainyhead subfamily members are, therefore, believed to act as transcription factors during development. GRHL1, GRHL2 and GRHL3 are localized to the nucleus and exist as homodimers or as heterodimers with each other. GRHL3, also known as sister of mammalian grainyhead (SOM) or transcription factor CP2-like 4 (TFCP2L4), is a 626 amino acid protein. Transgenic GRHL3-null mouse embryos have displayed many neural tube defects, indicating a significant role of GRHL3 in neural tube formation during development. GRHL3 is widely expressed and exists as 4 isoforms produced by alternative splicing. Isoform 2 has been shown to be prostate specific.

## CHROMOSOMAL LOCATION

Genetic locus: GRHL3 (human) mapping to 1p36.11; *Grhl3* (mouse) mapping to 4 D3.

## SOURCE

GRHL3 (G-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GRHL3 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-131537 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

GRHL3 (G-15) is recommended for detection of GRHL3 isoforms 1-4 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 family members GRHL1 or GRHL2.

GRHL3 (G-15) is also recommended for detection of GRHL3 isoforms 1-4 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for GRHL3 siRNA (h): sc-78890, GRHL3 siRNA (m): sc-145762, GRHL3 shRNA Plasmid (h): sc-78890-SH, GRHL3 shRNA Plasmid (m): sc-145762-SH, GRHL3 shRNA (h) Lentiviral Particles: sc-78890-V and GRHL3 shRNA (m) Lentiviral Particles: sc-145762-V.

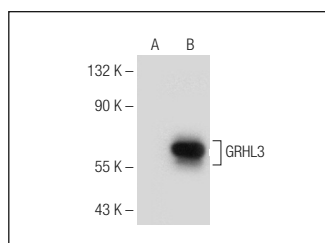
Molecular Weight of GRHL3: 70 kDa.

Positive Controls: placenta tissue extract or GRHL3 (h): 293T Lysate: sc-115727.

## 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



GRHL3 (G-15): sc-131537. Western blot analysis of GRHL3 expression in non-transfected: sc-117752 (A) and human GRHL3 transfected: sc-115727 (B) 293T whole cell lysates.

## RESEARCH USE

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

## PROTOCOLS

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Try **GRHL3 (C-12): sc-398838**, our highly recommended monoclonal alternative to GRHL3 (G-15).