10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# GRHL2 Antibody (Center) Blocking Peptide
**Synthetic peptide**
**Catalog # BP13148c**

## Specification

### GRHL2 Antibody (Center) Blocking Peptide - Product Information

Primary Accession Q6ISB3

### GRHL2 Antibody (Center) Blocking Peptide - Additional Information

**Gene ID** 79977

**Other Names**
Grainyhead-like protein 2 homolog, Brother of mammalian grainyhead, Transcription factor CP2-like 3, GRHL2, BOM, TFCP2L3

**Target/Specificity**
The synthetic peptide sequence used to generate the antibody AP13148c was selected from the Center region of GRHL2. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**Format**
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

### GRHL2 Antibody (Center) Blocking Peptide - Protein Information

**Name** GRHL2

**Synonyms** BOM, TFCP2L3

**Function**
Transcription factor playing an important role in primary neurulation and in epithelial development (PubMed:<a href="http://www.uniprot.org/citations/29309642" target="_blank">29309642</a>, PubMed:<a href="http://www.uniprot.org/citations/25152456" target="_blank">25152456</a>). Binds directly to the consensus DNA sequence 5'- AACCGGTT-3' acting as an activator and repressor on distinct target genes (By similarity). During embryogenesis, plays unique and cooperative roles with GRHL3 in establishing distinct zones of primary neurulation. Essential for closure 3 (rostral end of the forebrain), functions cooperatively with GRHL3 in closure 2 (forebrain/midbrain boundary) and posterior neuropore closure (By similarity). Regulates epithelial morphogenesis acting as a target gene-associated transcriptional activator of apical junctional complex components. Up- regulates of CLDN3 and CLDN4, as well as of RAB25, which increases

the CLDN4 protein and its localization at tight junctions (By similarity). Comprises an essential component of the transcriptional machinery that establishes appropriate expression levels of CLDN4 and CDH1 in different types of epithelia. Exhibits functional redundancy with GRHL3 in epidermal morphogenetic events and epidermal wound repair (By similarity). In lung, forms a regulatory loop with NKX2-1 that coordinates lung epithelial cell morphogenesis and differentiation (By similarity). In keratinocytes, plays a role in telomerase activation during cellular proliferation, regulates TERT expression by binding to TERT promoter region and inhibiting DNA methylation at the 5'-CpG island, possibly by interfering with DNMT1 enzyme activity (PubMed:<a href="http://www.uniprot.org/citations/19015635" target="_blank">19015635</a>, PubMed:<a href="http://www.uniprot.org/citations/20938050" target="_blank">20938050</a>). In addition, impairs keratinocyte differentiation and epidermal function by inhibiting the expression of genes clustered at the epidermal differentiation complex (EDC) as well as GRHL1 and GRHL3 through epigenetic mechanisms (PubMed:<a href="http://www.uniprot.org/citations/23254293" target="_blank">23254293</a>).

**Cellular Location**
Nucleus. Membrane. Note=detected at cell-cell contact areas.

**Tissue Location**
Expressed in keratinocytes (at protein level). Highly expressed in placenta, prostate, brain and kidney. Lower-level expression in a variety of epithelial tissues such as thymus, lung, salivary gland, mammary gland and digestive tract. Expressed in the cochlear. Expressed in corneal epithelial cells, but not in the endothelium or stroma (PubMed:29499165).

## GRHL2 Antibody (Center) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

## GRHL2 Antibody (Center) Blocking Peptide - Images

## GRHL2 Antibody (Center) Blocking Peptide - Background

The protein encoded by this gene is a transcription factorthat can act as a homodimer or as a heterodimer with either GRHL1or GRHL3. Defects in this gene are a cause of non-syndromicsensorineural deafness autosomal dominant type 28 (DFNA28).

## GRHL2 Antibody (Center) Blocking Peptide - References

Werth, M., et al. Development 137(22):3835-3845(2010)Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :Kang, X., et al. Oncogene 28(4):565-574(2009)Tanaka, Y., et al. J. Hepatol. 49(5):746-757(2008)Van Laer, L., et al. Hum. Mol. Genet. 17(2):159-169(2008)