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GRHL2 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13148c

Product Information

Application	WB, E
Primary Accession	Q6ISB3
Other Accession	Q8K5C0, NP_079191.2
Reactivity	Human, Mouse
Predicted	Mouse, Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB32577
Calculated MW	71105
Antigen Region	409-438

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	This GRHL2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 409-438 amino acids from the Central region of human GRHL2.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	GRHL2 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GRHL2
Synonyms	BOM, TFCP2L3

Function	Transcription factor playing an important role in primary neurulation and in epithelial development (PubMed:25152456, PubMed:29309642). 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:19015635, PubMed:20938050). 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:23254293).
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).

Background

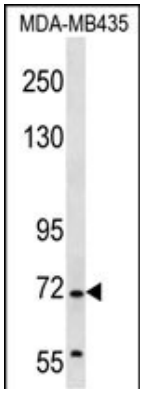
The protein encoded by this gene is a transcription factor that can act as a homodimer or as a heterodimer with either GRHL1 or GRHL3. Defects in this gene are a cause of non-syndromic sensorineural deafness autosomal dominant type 28 (DFNA28).

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)

Images

GRHL2 Antibody (Center) (Cat. #AP13148c) western blot analysis in MDA-MB435 cell line lysates (35ug/lane).This demonstrates the GRHL2 antibody detected the GRHL2 protein (arrow).



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.