

GRHL2 Protein, Human, Recombinant (His)

General Information

Synonyms:	BOM;Grainyhead-like protein 2 homolog;Brother of mammalian grainyhead;TFCP2L3; Transcription factor CP2-like 3;GRHL2
Protein Construction:	1-625 aa
Species:	Human
Expression Host:	E. coli
Accession:	Q6ISB3
Molecular Weight:	75.2 kDa (predicted)
AA Sequence:	MSQESDNNKRLVALVPMPSDPPFNTRRAYTSEDEAWKSYLENPLTAATKAMMSINGDEDSAAALGLLYDYY KVPRDKRLLSVSKASDSQEDQEKRNCLGTSEAQSNLSGGENRVQLKTPVNLSLNQDHLENSKREQYSISF PESSAIIIPVSGITVVKAEDFTPVMAPPVHYPRGDGEEQRVIFEQTQYDVPSLATHSAYLKDDQRSTPDSTYS ESFKDAATEKFRSASVGAEEYMYDQTSSGTFQYTLKSLRQKQEGEPMTYLNKGQFYAITLSETGDNKCFR HPISKVRSVVMVVFSEDKNRDEQLKYWKYWSHRQHTAKQRVLDIADYKESFNTIGNIEEIAYNVAVSFTWDVN EEAKIFITVNCLSTDFSSQKGVKGLPLMIQIDTYSYNNRSNKPIHRAYCQIKVFCDKGAERKIRDEERKQNRKKG KGQASQTQCNSSDGKLAAIPLQKSDITYFKTMPDLHSQPVLFIQVDFHVFANLQRTGQVYYNTDDEREGGSV LVKRMFRPMEEEFGPVPSKQMKEEGTKRVLLYVRKETDDVDFDALMLKSPTVKGLMEASEKYGLPVEKIAKLYK KSKKGILVNMDDNIIHYSNEDTFILNMESMVEGFKVTLMEI

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 85% as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	If the delivery form is liquid, the default storage buffer is Tris/PBS-based buffer, 5%-50% glycerol. If the delivery form is lyophilized powder, the buffer before lyophilization is Tris/PBS-based buffer, 6% Trehalose, pH 8.0.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in sterile deionized water. The product concentration should not be less than 100 μg/mL. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months.

Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Transcription factor playing an important role in primary neurulation and in epithelial development. Binds directly to the consensus DNA sequence 5'-AACCGGT-3' acting as an activator and repressor on distinct target genes. 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. 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. 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. In lung, forms a regulatory loop with NKX2-1 that coordinates lung epithelial cell morphogenesis and differentiation. 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. 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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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