

## RHEB Human

**Description:** RHEB Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 197 amino acids (1-181 amino acids) and having a molecular mass of 21.7 kDa. The RHEB is fused to T7-tag at N-terminus (16 a.a.) and is purified by standard chromatography techniques.

**Catalog #:** PRPS-315

For research use only.

**Synonyms:** RHEB2, GTP-binding protein Rheb, MGC111559, Ras homolog enriched in brain, RHEB.

**Source:** Escherichia Coli.

**Physical Appearance:** Sterile Filtered colorless solution.

**Amino Acid Sequence:** MASMTGGQQM GRGSASMPQS KSRKIALGY RSVGKSSLT  
QFVEGQFVDS YDPTIENTFT KLITVNGQEY HLQLVDTAGQ DEYSIFPQTY SIDINGYILV  
YSVTSIKSFE VIKVIHGKLL DMVGKVQIPI MLVGNKKDLH MERVISYEEG KALAESWNAA  
FLESSAKENQ TAVDVFRRII LEAEKMDGAA SQGKSSC.

**Purity:** Greater than 95.0% as determined by SDS-PAGE.

**Formulation:**

The RHEB protein solution (1mg/ml) contains 20mM Tris-HCl pH-8, 1mM DTT and 10% glycerol.

**Stability:**

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

**Usage:**

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

**Introduction:**

RHEB is part of the Ras & GTPase superfamily that was originally identified as an immediate-early gene in brain but is also widely expressed in other tissues. RHEB encodes a lipid-anchored, cell membrane protein with five repeats of the RAS-related GTP-binding region. RHEB is necessary in regulation of growth and cell cycle progression due to its role in the insulin/TOR/S6K signaling pathway. RHEB has GTPase activity and shuttles between a GDP-bound form and a GTP-bound form, and farnesylation of the protein is required for this activity. RHEB induces oncogenic transformation. RHEB overexpression accelerates lymphomagenesis and is associated with prostate cancer. RHEB can cytopathologically distinguish between fibroadenoma from malignant breast carcinomas which is considered as a secondary diagnostic tool. RHEB has a central role in the regulation of the Ras/B-Raf/C-Raf/MEK signaling network.

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