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## Product Data Sheet

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Product Name: RHEB Human  
 Cat. No.: GP24382  
 Batch No.: 1

### Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	RHEB2; GTP-binding protein Rheb; MGC111559; Ras homolog enriched in brain; RHEB.		
Amino Acid Sequence	MASMTGGQQM GRGSASMPQS KSRKIALGY RSVGKSSLTI QFVEGQFVDS YDPTIENTFT KLITVNGQEY HLQLVDTAGQ DEYSIFPQTY SIDINGYILV YSVTSIKSFE VIKVIHGKLL DMVGKQIQPI MLVGNKKDLH MERVISYEEG KALAESWNAA FLESSAKENQ TAVDVFRRII LEAEKMDGAA SQGKSSC.		
Formulation	The RHEB protein solution (1mg/ml) contains 20mM Tris-HCl pH-8, 1mM DTT and 10% glycerol.		

### 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 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.

### 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%

**Caution: Product has not been fully validated for medical applications. For research use only.**

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HSA or BSA). Avoid multiple freeze-thaw cycles.

### Background

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.

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