

LAMTOR2 Protein, Human (His)

Cat. No.:	HY-P77053
Synonyms:	Ragulator complex protein LAMTOR2; MAPBP-interacting protein; MAPBPBP; ROBLD3; HSPC003
Species:	Human
Source:	E. coli
Accession:	Q9Y2Q5 (M1-S125)
Gene ID:	28956
Molecular Weight:	Approximately 13 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μ m filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/ μ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μ g/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	<p>As a crucial component of the Ragulator complex, LAMTOR2 plays a central role in amino acid sensing and the activation of mTORC1, a signaling complex that promotes cell growth in response to various stimuli, including growth factors, energy levels, and amino acids. Activated by amino acids, the Ragulator complex functions as a guanine nucleotide exchange factor (GEF) for the small GTPases Rag (RagA/RRAGA, RagB/RRAGB, RagC/RRAGC, and/or RagD/RRAGD), simultaneously mediating the recruitment of Rag GTPases to the lysosome membrane. This orchestrated activation of the Ragulator and Rag GTPases serves as a scaffold, recruiting mTORC1 to lysosomes, where it is subsequently activated. Additionally, LAMTOR2 acts as an adapter protein enhancing the efficiency of the MAP kinase cascade, facilitating the activation of MAPK2 (By similarity). LAMTOR2 is part of the Ragulator complex, interacting with LAMTOR1 and LAMTOR3, and is a key player in the lysosomal folliculin complex (LFC), which includes FLCN, FNIP1 (or FNIP2), RagA/RRAGA or RagB/RRAGB GDP-bound, RagC/RRAGC or RagD/RRAGD GTP-bound, and Ragulator.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA