

Recombinant Mouse Eprs Protein, MYC/DDK-tagged

Cat. No. Eprs-331M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Purified recombinant protein of full-length mouse glutamyl-prolyl-tRNA synthetase (Eprs), with C-terminal MYC/DDK tag, expressed in HEK293T cells.
Species	Mouse
Source	HEK293
Description	Multifunctional protein which is primarily part of the aminoacyl-tRNA synthetase multienzyme complex, also known as multisynthetase complex, that catalyzes the attachment of the cognate amino acid to the corresponding tRNA in a two-step reaction: the amino acid is first activated by ATP to form a covalent intermediate with AMP and is then transferred to the acceptor end of the cognate tRNA. The phosphorylation of EPRS1, induced by interferon-gamma, dissociates the protein from the aminoacyl-tRNA synthetase multienzyme complex and recruits it to the GAIT complex that binds to stem loop-containing GAIT elements in the 3'-UTR of diverse inflammatory mRNAs (such as ceruplasmin), suppressing their translation. Interferon-gamma can therefore redirect, in specific cells, the EPRS1 function from protein synthesis to translation inhibition. Also functions as an effector of the mTORC1 signaling pathway by promoting, through SLC27A1, the uptake of long-chain fatty acid by adipocytes. Thereby, it also plays a role in fat metabolism and more indirectly influences lifespan.
Molecular Mass	170.5 kDa

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Purity	>80%, as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade after receiving vials.
Concentration	>50 ug/mL as determined by microplate BCA method
Storage Buffer	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

GENE INFORMATION

Gene Name	Eprs glutamyl-prolyl-tRNA synthetase [Mus musculus (house mouse)]
Official Symbol	Eprs
Synonyms	Eprs; glutamyl-prolyl-tRNA synthetase; Qprs; Eprs1; C79379; 2410081F06Rik; 3010002K18Rik; bifunctional glutamate/proline--tRNA ligase; bifunctional aminoacyl-tRNA synthetase; glutamine-proline-tRNA synthetase; EC 6.1.1.15; EC 6.1.1.17
Gene ID	107508
mRNA Refseq	NM_029735
Protein Refseq	NP_084011
UniProt ID	Q8CGC7

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