

Supplementary Figure 2



EIF2AK4

Eukaryotic translation initiation factor 2 alpha kinase 4; Metabolic-stress sensing protein kinase that phosphorylates the alpha subunit of eukaryotic translation initiation factor 2 (eIF-2-alpha/EIF2S1) on 'Ser-52' in response to low amino acid availability (PubMed-25329545). Plays a role as an activator of the integrated stress response (ISR) required for adaptation to amino acid starvation. Converts phosphorylated eIF-2-alpha/EIF2S1 either to a competitive inhibitor of the translation initiation factor eIF-2B, leading to a global protein synthesis repression, and thus to a reduced [...] (1649 aa)

Predicted Functional Partners:

		Neighborhood	Gene Fusion	Cooccurrence	Coexpression	Experiments	Databases	Textmining	[Homology]	Score
EIF2S1	Eukaryotic translation initiation factor 2, subunit 1 alpha, 35kDa; Functions in the early steps of protein synthesis by forming a ...									0.999
EIF2S2	Eukaryotic translation initiation factor 2, subunit 2 beta, 38kDa; eIF-2 functions in the early steps of protein synthesis by formi...									0.991
GCN1L1	GCN1 general control of amino-acid synthesis 1-like 1 (yeast); Acts as a positive activator of the EIF2AK4/GCN2 protein kinas...									0.970
EIF2S3	Eukaryotic translation initiation factor 2, subunit 3 gamma, 52kDa; As a subunit of eukaryotic initiation factor 2 (eIF2), involved...									0.952
DNAJC3	DnaJ (Hsp40) homolog, subfamily C, member 3; Involved in the unfolded protein response (UPR) during endoplasmic reticulu...									0.899
PPP1CC	Protein phosphatase 1, catalytic subunit, gamma isozyme; Protein phosphatase that associates with over 200 regulatory prot...									0.872
FARS2	phenylalanyl-tRNA synthetase 2, mitochondrial; Is responsible for the charging of tRNA(Phe) with phenylalanine in mitochondr...									0.871
ATF4	Activating transcription factor 4 (tax-responsive enhancer element B67); Transcriptional activator. Binds the cAMP response e...									0.849
PPP1CA	Protein phosphatase 1, catalytic subunit, alpha isozyme; Protein phosphatase that associates with over 200 regulatory protein...									0.835
EIF2B5	Eukaryotic translation initiation factor 2B, subunit 5 epsilon, 82kDa; Catalyzes the exchange of eukaryotic initiation factor 2-bo...									0.831

