

Recombinant Human EIF4E protein

Cat. No. EIF4E-2050H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human EIF4E was expressed in E. coli.
Species	Human
Source	E.coli
ProteinLength	2-217
Description	Eukaryotic translation is a complex biochemical process requiring several initiation factors. The first step in the initiation of mRNA translation involves binding of the small ribosomal subunit to mRNA. The central component in the recruitment of the pre-initiation complex during translation is the eukaryotic initiation factor 4F (eIF4F) complex, composed of eIF4A, eIF4E, and eIF4G1/eIF4G3. The 5'-terminal end of eukaryotic mRNA has a common cap structure that is important for stabilizing mRNA and ribosome binding. The eIF4E component binds specifically to the mRNA cap structure to initiate protein synthesis by recognizing methyl-7-guanosine. eIF4A is a DEAD-box helicase, responsible for unwinding the mRNA, while eIF4G acts as a scaffold protein with binding sites for the poly(A)-binding protein and eIF3. eIF4G also possesses central and C-terminal eIF4A binding sites and a C-terminal binding site for the protein kinase Mnk1 (mitogen-activated protein kinase-interacting kinase). Mnk1 phosphorylates eIF4E at Ser209, which is believed to be essential for eIF4E's oncogenic potential. Further, overexpression of eIF4e is seen in many human malignancies, including breast, colon, head and neck carcinomas, and others.

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Form	20 mM sodium phosphate, pH 7.3, containing 100 mM sodium chloride, 100 μ M TCEP, and 20% glycerol
Molecular Mass	25.2 kDa
Purity	$\geq 90\%$
Storage	Store product at -80 centigrade.

GENE INFORMATION

Gene Name	EIF4E eukaryotic translation initiation factor 4E [Homo sapiens]
Official Symbol	EIF4E
Synonyms	EIF4E; eukaryotic translation initiation factor 4E; EIF4EL1, EIF4F; EIF4E1; eIF-4E; eIF-4F 25 kDa subunit; mRNA cap-binding protein; eukaryotic translation initiation factor 4E-like 1; CBP; EIF4F; EIF4EL1; MGC111573;
Gene ID	1977
mRNA Refseq	NM_001130678
Protein Refseq	NP_001124150
MIM	133440
UniProt ID	P06730

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