Revision 1

Store at -20C

#4763

Translation Initiation Complex Antibody Sampler Kit

1 Kit (9 x 20 microliters)

Cell Signaling TECHNOLOGY®

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Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
eIF4A (C32B4) Rabbit mAb	2013	20 µl	48 kDa	Rabbit IgG
eIF4A1 Antibody	2490	20 µl	48 kDa	Rabbit
Phospho-eIF4B (Ser422) Antibody	3591	20 µl	80 kDa	Rabbit
eIF4B Antibody	3592	20 µl	80 kDa	Rabbit
Phospho-eIF4E (Ser209) Antibody	9741	20 µl	25 kDa	Rabbit
eIF4E (C46H6) Rabbit mAb	2067	20 µl	25 kDa	Rabbit IgG
Phospho-eIF4G (Ser1108) Antibody	2441	20 µl	220 kDa	Rabbit
eIF4G (C45A4) Rabbit mAb	2469	20 µl	220 kDa	Rabbit
eIF4H (D85F2) XP® Rabbit mAb	3469	20 µl	25, 27 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

Description

The Translation Initiation Complex Antibody Sampler Kit contains reagents to investigate the initiation of translation within the cell. The kit contains enough primary and secondary antibodies to perform two Western blot experiments per primary antibody.

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Background

A variety of factors contribute to the important biological event of translation initiation. The Eukaryotic initiation Factor 4E (eIF4E) complex of translation initiation factors binds to the 5' m^7 GTP cap to open up the mRNA secondary structure and allow small ribosome subunit binding (1). eIF4A, an eIF4 complex component that acts as an ATP-dependent RNA helicase, unwinds the secondary structure of the 5' mRNA untranslated region to mediate ribosome binding (2,3). EIF4E binds to the mRNA cap structure to mediate the initiation of translation (4,5). eIF4E interacts with eIF4G, a scaffold protein that promotes assembly of eIF4E and eIF4A into the eIF4F complex (5). eIF4B is thought to assist the eIF4F complex in translation initiation. eIF4H induces the RNA-dependent ATP hydrolysis catalyzed by the initiation factors eIF4A and eIF4B (2,6). eIF4H was further shown to determine the initial rate and extent of eIF4A-mediated mRNA secondary structure unwinding (7).

Background References

1. Rogers, G.W. et al. (2001) *J Biol Chem* 276, 12598-608.
2. Rogers, G.W. et al. (1999) *J Biol Chem* 274, 12236-44.
3. Svitkin, Y.V. et al. (2001) *RNA* 7, 382-94.
4. Sonenberg, N. et al. (1978) *Proc Natl Acad Sci U S A* 75, 4843-7.
5. Gingras, A.C. et al. (1999) *Annu Rev Biochem* 68, 913-63.
6. Richter-Cook, N.J. et al. (1998) *J Biol Chem* 273, 7579-87.

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