**BACKGROUND**

Translation initiation in eukaryotes necessitates the assembly of an 80S ribosomal complex. Eukaryotic initiation factors (eIFs) are utilized in a sequence of reactions that leads to 80S ribosomal assembly and initiation of translation. Mammalian eukaryotic translation initiation factor 4F (eIF4F) is a protein complex that contains eIF4A, eIF4E and eIF4G, binds mRNA at a 5'-cap motif and recruits the 43S ribosomal preinitiation complex to the eligible transcript. Along with eIF4B, the eIF4F complex mediates the unwinding of mRNA secondary structure to facilitate ribosome association. eIF4E specifically interacts with the 5' cap, eIF4A (I,II) are bidirectional RNA helicases, and eIF4G(I,II) are scaffolding proteins which coordinate eIF4E, eIF4A, eIF3 and the 40S ribosome. Human eIF4AI (eIF4A, DDX2A) is a 406 amino acid protein that is 92.7% homologous to mouse eIF4AI. The promoter region of human eIF4A1 contains TATA and CAA T motifs and consensus binding sites to Sp1 and AP2.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: E/F (human) mapping to 3q27.3; eIF4A2 (mouse) mapping to 16 B1.

**SOURCE**

eIF4AI (H-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2-43 at the N-terminus of eIF4AI of human origin.

**PRODUCT**

Each vial contains 200 µg IgG2b kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Blocking peptide available for competition studies, sc-137148 P (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

**STORAGE**

Store at 4° C. **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**APPLICATIONS**

eIF4AI (H-5) is recommended for detection of eIF4AI of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for eIF4AI siRNA (h): sc-40556, eIF4AI siRNA (m): sc-40557, eIF4AI shRNA Plasmid (h): sc-40556-SH, eIF4AI shRNA Plasmid (m): sc-40557-SH, eIF4AI shRNA (h) Lentiviral Particles: sc-40556-V and eIF4AI shRNA (m) Lentiviral Particles: sc-40557-V.

Molecular Weight of eIF4AI: 46 kDa.

Positive Controls: NCI-H292 whole cell lysate: sc-364179, SK-N-MC cell lysate: sc-2237 or F9 cell lysate: sc-2245.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HP: sc-516102 or m-IgGκ BP-HP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-RTC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Hard-set Mounting Medium: sc-24914 or UltraCruz® Hard-set Mounting Medium: sc-359850.

**DATA**

**SELECT PRODUCT CITATIONS**


**PROTOCOLS**

See our web site at www.scbt.com for detailed protocols and support products.