SANTA CRUZ BIOTECHNOLOGY, INC.

# eIF3M (V-21): sc-133541

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

The initiation of protein synthesis in eukaryotic cells is regulated by interactions between protein initiation factors and RNA molecules. Eukaryotic initiation factors (eIFs) are utilized in a sequence of reactions that lead to 80S ribosomal assembly and, ultimately, translation. The eukaryotic initiation factor-3 (eIF3) scaffolding structure is the largest of the eIF complexes and includes eIF3α, eIF3β, eIF3γ, eIF3δ, eIF3ε, eIF3ζ, eIF3η, eIF3θ and eIF3M, all of which function to control the assembly of the 40S ribosomal subunit. Association of eIF3 proteins with the 40S ribosomal subunit stabilizes eIF2-GTP-Met-tRNAiMet complex association and mRNA binding, and promotes dissociation of 80S ribosomes into 40S and 60S subunits, thereby promoting the assembly of the pre-initiation complex. eIF3M (eukaryotic translation initiation factor 3, subunit M), also known as HFLB5 or PCID1, is a 374 amino acid protein that localizes to the cytoplasm where it exists as a component of the eIF3 complex and plays a role in translation.

## REFERENCES


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4. LeFebvre, A.K., et al. 2006. Translation initiation factor eIF4G-1 binds to eIF3 through the eIF3ε subunit. J. Biol. Chem. 281: 22917-22932.
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6. Masutani, M., et al. 2007. Reconstitution reveals the functional core of mammalian eIF3. EMBO J. 26: 3373-3383.
7. Zhang, L., et al. 2007. Individual overexpression of five subunits of human translation initiation factor eIF3 promotes malignant transformation of immortal fibroblast cells. J. Biol. Chem. 282: 5790-5800.
8. Sato, H., et al. 2007. Measles virus N protein inhibits host translation by binding to eIF3-p40. J. Virol. 81: 11569-11576.
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## CHROMOSOMAL LOCATION

Genetic locus: EIF3M (human) mapping to 11p13; Eif3m (mouse) mapping to 2 E2.

## STORAGE

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

## SOURCE

eIF3M (V-21) is a Protein A purified rabbit polyclonal antibody raised against synthetic eIF3M peptide of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

## APPLICATIONS

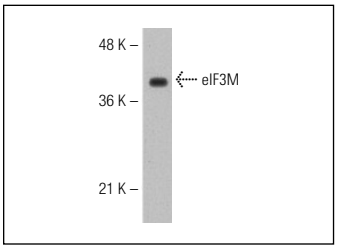
eIF3M (V-21) is recommended for detection of eIF3M of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 eIF3M siRNA (h): sc-96834, eIF3M siRNA (m): sc-144616, eIF3M shRNA Plasmid (h): sc-96834-SH, eIF3M shRNA Plasmid (m): sc-144616-SH, eIF3M shRNA (h) Lentiviral Particles: sc-96834-V and eIF3M shRNA (m) Lentiviral Particles: sc-144616-V.

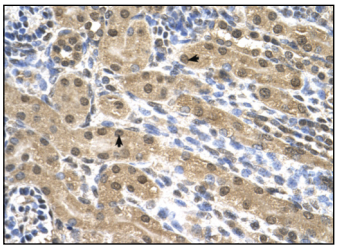
Molecular Weight of eIF3M: 43 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, mouse brain extract: sc-2253 or human kidney tissue.

## DATA




eIF3M (V-21): sc-133541. Western blot analysis of eIF3M expression in Hep G2 whole cell lysate.



eIF3M (V-21): sc-133541. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human kidney tissue showing nuclear and cytoplasmic localization.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

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