

# eRF3b (32): sc-135899

## BACKGROUND

eRF3b (eukaryotic peptide chain release factor subunit 3b), also known as Gspt2 (G<sub>1</sub> to S phase transition 2), is a 632 amino acid cytoplasmic protein belonging to the GTP-binding elongation factor family. Highly expressed in brain, eRF3b is involved in translation termination in response to the termination codons UAA, UAG and UGA. As a potent stimulator, eRF3b may play a role in the release factor activity of eRF1. eRF3b exhibits GTPase activity, which is ribosome- and eRF1-dependent, and may participate in cell cycle progression. eRF3b is moderately expressed in spleen and lung with weak expression in heart, liver and kidney. eRF3b contains three GTP binding sites and is a component of the mRNA surveillance SURF complex.

## REFERENCES

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2. Hoshino, S., et al. 1998. Molecular cloning of a novel member of the eukaryotic polypeptide chain-releasing factors (eRF). Its identification as eRF3 interacting with eRF1. *J. Biol. Chem.* 273: 22254-22259.
3. Jakobsen, C.G., et al. 2001. Identification of a novel termination release factor eRF3b expressing the eRF3 activity *in vitro* and *in vivo*. *Mol. Biol.* 35: 672-681.
4. Le Goff, C., et al. 2002. Mouse Gspt2, but not Gspt1, can substitute for yeast eRF3 *in vivo*. *Genes Cells* 7: 1043-1057.
5. Chauvin, C., et al. 2005. Involvement of human release factors eRF3a and eRF3b in translation termination and regulation of the termination complex formation. *Mol. Cell. Biol.* 25: 5801-5811.
6. Houravleva, G., et al. 2006. Evolution of translation termination factor eRF3: is Gspt2 generated by retrotransposition of Gspt1's mRNA? *IUBMB Life* 58: 199-202.
7. Zhuravleva, G.A., et al. 2007. Conservation of the MC domains in eukaryotic translation factor eRF3. *Genetika* 43: 38-44.
8. Chauvin, C., et al. 2007. Human eukaryotic release factor 3a depletion causes cell cycle arrest at G<sub>1</sub> phase through inhibition of the mTOR pathway. *Mol. Cell. Biol.* 27: 5619-5629.
9. Tarasov, O.V., et al. 2008. Evaluation of the gene encoding translation termination factor eRF3 as a possible phylogenetic marker. *Mol. Biol.* 42: 937-946.

## CHROMOSOMAL LOCATION

Genetic locus: Gspt2 (mouse) mapping to X C3.

## SOURCE

eRF3b (32) is a mouse monoclonal antibody raised against amino acids 19-126 of eRF3b of mouse origin.

## RESEARCH USE

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

## PRODUCT

Each vial contains 50 µg IgG<sub>1</sub> in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

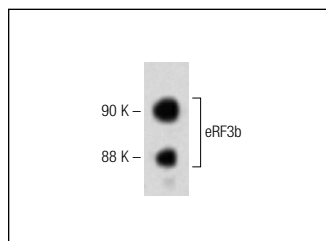
eRF3b (32) is recommended for detection of eRF3b of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for eRF3b siRNA (m): sc-144925, eRF3b shRNA Plasmid (m): sc-144925-SH and eRF3b shRNA (m) Lentiviral Particles: sc-144925-V.

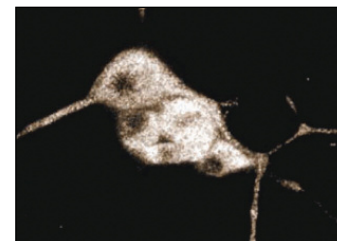
Molecular Weight of eRF3b: 97 kDa.

Positive Controls: PC-12 cell lysate: sc-2250 or rat brain extract: sc-2392.

## DATA



eRF3b (32): sc-135899. Western blot analysis of eRF3b expression in rat brain tissue extract.



eRF3b (32): sc-135899. Immunofluorescence staining of PC-12 cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Cong, W.N., et al. 2012. Altered hypothalamic protein expression in a rat model of Huntington's disease. *PLoS ONE* 7: e47240.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.