

EF-G2 (T-12): sc-137446

BACKGROUND

Mitochondrial translation is critical for maintaining function and preventing impairment of mitochondrial DNA, with mitochondrial translation elongation factors playing an essential role in this process. EF-G2 (elongation factor G2), also known as RRF2mt (ribosome-releasing factor 2, mitochondrial), GFM2 or MSTP027, is a 779 amino acid protein belonging to the GTP-binding elongation factor family and EF-G/EF-2 subfamily. Localizing to mitochondrion, EF-G2 is widely expressed with high levels found in adult heart, skeletal muscle and kidney as well as adult and fetal liver. EF-G2 mediates ribosome recycling and by interacting directly with MRRF on the ribosome large subunit, is required for ribosome dissociation from mRNA. Existing as five alternatively spliced isoforms, the gene encoding EF-G2 maps to human chromosome 5q13.3.

REFERENCES

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3. Li, J., et al. 2007. Separation and identification of the exosomes derived from a mouse hepatoma carcinoma cell line (H22) and initial investigation of their protein composition. *Zhonghua Gan Zang Bing Za Zhi* 15: 437-440.
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6. Tsuboi, M., et al. 2009. EF-G2mt is an exclusive recycling factor in mammalian mitochondrial protein synthesis. *Mol. Cell* 35: 502-510.
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CHROMOSOMAL LOCATION

Genetic locus: GFM2 (human) mapping to 5q13.3; Gfm2 (mouse) mapping to 13 D1.

SOURCE

EF-G2 (T-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of EF-G2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-137446 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

EF-G2 (T-12) is recommended for detection of EF-G2 isoforms 1 and 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with EF-G1.

EF-G2 (T-12) is also recommended for detection of EF-G2 isoforms 1 and 2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for EF-G2 siRNA (h): sc-91850, EF-G2 siRNA (m): sc-143308, EF-G2 shRNA Plasmid (h): sc-91850-SH, EF-G2 shRNA Plasmid (m): sc-143308-SH, EF-G2 shRNA (h) Lentiviral Particles: sc-91850-V and EF-G2 shRNA (m) Lentiviral Particles: sc-143308-V.

Molecular Weight of EF-G2 isoforms 1-5: 87/81/86/67/57 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

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.