BACKGROUND
Aminoacyl-tRNA synthetases consist of a family of enzymes that catalyze the specific aminoacylation of tRNA by their cognate amino acid in the initial step of ribosome-dependent protein biosynthesis. Cytoplasmic CysRS (cysteinyl-tRNA synthetase, cytoplasmic), also known as CARS, is a 748 amino acid member of the class-I aminoacyl-tRNA synthetase protein family. Cytoplasmic CysRS is a monomeric protein that binds one zinc ion per subunit for use as a cofactor. Cytoplasmic CysRS uses ATP to convert L-cysteine and tRNA(Cys) into ADP, a diphosphate and L-cysteinyl-tRNA(Cys). A chromosomal aberration of the gene that encodes Cytoplasmic CysRS is associated with inflammatory myofibroblastic tumors (IMTs). Cytoplasmic CysRS is expressed as two isoforms produced by alternative splicing events.

REFERENCES

CHROMOSOMAL LOCATION
Genetic locus: CARS (human) mapping to 11p15.4; Cars (mouse) mapping to 7 F5.

SOURCE
Cytoplasmic CysRS (H-60) is a rabbit polyclonal antibody raised against amino acids 424-483 mapping near the C-terminus of Cytoplasmic CysRS 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.

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

APPLICATIONS
Cytoplasmic CysRS (H-60) is recommended for detection of Cytoplasmic CysRS 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).


Molecular Weight of Cytoplasmic CysRS: 85 kDa.

RECOMMENDED SECONDARY REAGENTS
To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:10000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.