

# MetRS (C-20): sc-79261

## BACKGROUND

MetRS is a cytoplasmic methionyl-tRNA synthetase. It belongs to the class-I aminoacyl-tRNA synthetase family and contains one GST-like domain and one WHEP-TRS domain. Methionyl-tRNA synthetase is an enzyme that catalyzes the esterification of a Met residue to its compatible cognate tRNA to form Met-tRNA. This enzyme performs its functions with high precision by synchronously recognizing the anticodon region and the aminoacylation region, which are separated by approximately 70 angstroms in space. MetRS is thereby considered allosteric, in that its trinucleotide anticodons bind the enzyme at a site removed from its catalytic domains.

## REFERENCES

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- Han, J.M., Lee, M.J., Park, S.G., Lee, S.H., Razin, E., Choi, E.C. and Kim, S. 2006. Hierarchical network between the components of the multi-tRNA synthetase complex: implications for complex formation. *J. Biol. Chem.* 281: 38663-38667.

## CHROMOSOMAL LOCATION

Genetic locus: MARS (human) mapping to 12q13.3; Mars (mouse) mapping to 10 D3.

## SOURCE

MetRS (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of MetRS 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-79261 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

MetRS (C-20) is recommended for detection of MetRS 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), 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).

MetRS (C-20) is also recommended for detection of MetRS in additional species, including equine, canine and porcine.

Suitable for use as control antibody for MetRS siRNA (h): sc-75775, MetRS siRNA (m): sc-75776, MetRS shRNA Plasmid (h): sc-75775-SH, MetRS shRNA Plasmid (m): sc-75776-SH, MetRS shRNA (h) Lentiviral Particles: sc-75775-V and MetRS shRNA (m) Lentiviral Particles: sc-75776-V.

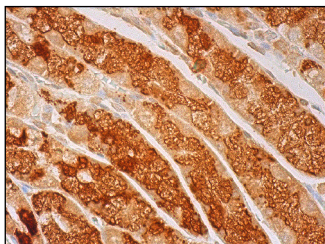
Molecular Weight of MetRS: 101 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, SW480 cell lysate: sc-2219 or NIH/3T3 whole cell lysate: sc-2210.

## 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



MetRS (C-20): sc-79261. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lower stomach tissue showing cytoplasmic and nuclear staining of glandular cells.

## 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.