

COMT (C-20): sc-28119

BACKGROUND

Catechol-O-methyltransferase (COMT) plays a crucial role in the regulation of central dopaminergic systems by catalyzing the inactivation of catecholamines. It is widely distributed in most tissues in soluble and membrane-bound forms. COMT-mediated methylation metabolism of catecholamine neurotransmitters is a first-line detoxification pathway. A Val158Met polymorphism of the COMT gene affects activity of the enzyme and influences performance and efficiency of the prefrontal cortex of the brain. Sequential conversion of estradiol to methoxyestradiol by COMT, contributes to the antimitogenic effects of estradiol on vascular smooth muscle cell growth via estrogen receptor-independent mechanisms.

REFERENCES

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- Kang, S.G., et al. 2008. Val158Met polymorphism in the catechol-O-methyltransferase (COMT) gene is not associated with tardive dyskinesia in schizophrenia. *Neuropsychobiology* 57: 22-25.
- Sengupta, S., et al. 2008. COMT Val108/158Met polymorphism and the modulation of task-oriented behavior in children with ADHD. *Neuropsychopharmacology* 33: 3069-3077.

CHROMOSOMAL LOCATION

Genetic locus: COMT (human) mapping to 22q11.21; Comt (mouse) mapping to 16 A3.

SOURCE

COMT (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of catechol-O-methyltransferase 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-28119 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

COMT (C-20) is recommended for detection of COMT 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).

Suitable for use as control antibody for COMT siRNA (h): sc-43693, COMT siRNA (m): sc-77372, COMT siRNA (r): sc-156149, COMT shRNA Plasmid (h): sc-43693-SH, COMT shRNA Plasmid (m): sc-77372-SH, COMT shRNA Plasmid (r): sc-156149-SH, COMT shRNA (h) Lentiviral Particles: sc-43693-V, COMT shRNA (m) Lentiviral Particles: sc-77372-V and COMT shRNA (r) Lentiviral Particles: sc-156149-V.

Molecular Weight of soluble COMT: 26 kDa.

Molecular Weight of membrane bound COMT: 30 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, K-562 whole cell lysate: sc-2203 or JAR cell lysate: sc-2276.

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.

SELECT PRODUCT CITATIONS

- Chiang, K.C., et al. 2014. The vitamin D analog, MART-10, represses metastasis potential via downregulation of epithelial-mesenchymal transition in pancreatic cancer cells. *Cancer Lett.* 354: 235-244.

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.