SANTA CRUZ BIOTECHNOLOGY, INC.

COMT (FL-271): sc-25844



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 membranebound 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 catechol-O-methyltransferase (COMT), contributes to the antimitogenic effects of estradiol on vascular smooth muscle cell growth via estrogen receptor-independent mechanisms.

CHROMOSOMAL LOCATION

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

SOURCE

COMT (FL-271) is a rabbit polyclonal antibody raised against amino acids 1-271 representing full length catechol-0-methyltransferase of human origin.

PRODUCT

Each vial contains 200 μg lgG 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

COMT (FL-271) is recommended for detection of soluble and membrane bound COMT 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), 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).

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

Molecular Weight of soluble COMT: 26 kDa.

Molecular Weight of membrane-bound COMT: 30 kDa.

Positive Controls: COMT (h): 293T Lysate: sc-111755, Jurkat whole cell lysate: sc-2204 or IMR-32 cell lysate: sc-2409.

RESEARCH USE

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

DATA





COMT (FL-271): sc-25844. Western blot analysis of COMT expression in non-transfected 293T: sc-117752 (A), human COMT transfected 293T: sc-111755 (B) and Jurkat (C) whole cell lysates.

COMT (FL-271): sc-25844. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and membrane localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing cytoplasmic and nuclear staining of urothelial cells (**B**).

SELECT PRODUCT CITATIONS

- Michard, Q., et al. 2008. TRP-2 expression protects HEK cells from dopamine- and hydroquinone-induced toxicity. Free Radic. Biol. Med. 45: 1002-1010.
- Skopec, M.M. and Dearing, M.D. 2011. Differential expression and activity of catechol-O-methyl transferase (COMT) in a generalist (*Neotoma albigula*) and juniper specialist (*Neotoma stephensi*) woodrat. Comp. Biochem. Physiol. C Toxicol. Pharmacol. 154: 383-390.
- Karpeta, A., et al. 2012. Activation of the enzymes of phase I (CYP2B1/2) and phase II (SULT1A and COMT) metabolism by 2,2',4,4'-tetrabromodiphenyl ether (BDE47) in the pig ovary. Reprod. Toxicol. 34: 436-442.
- Wang, P., et al. 2012. Quercetin increased bioavailability and decreased methylation of green tea polyphenols *in vitro* and *in vivo*. Food Funct. 3: 635-642.
- Wang, P., et al. 2012. Quercetin increased the antiproliferative activity of green tea polyphenol (-)-epigallocatechin gallate in prostate cancer cells. Nutr. Cancer 64: 580-587.

MONOS Satisfation Guaranteed

Try **COMT (G-4):** sc-137253 or **COMT (4):** sc-135872, our highly recommended monoclonal aternatives to COMT (FL-271).