abcam

ab248016

Anti-COMT antibody [EPR6491(B)] - BSA and Azide free

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR6491(B)
Purification technique	Affinity purification Protein A
Dissociation constant	1.01 x 10^{-10} M
Concentration	1.048 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Not recommended

Species	Human, Rat

Dilution info	-
Notes	-

IP

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

Flow Cyt

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Rat
Dilution info	-

Notes	-

IHC-P

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

Target data

See full target information Catechol O-methyltransferase

Function	Catalyzes the O-methylation, and thereby the inactivation, of catecholamine neurotransmitters and catechol hormones. Also shortens the biological half-lives of certain neuroactive drugs, like L-DOPA, alpha-methyl DOPA and isoproterenol.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab248016 is the carrier-free version of ab124813.

Species reactivity

Mouse: We have preliminary internal testing data to indicate this antibody may not react with this species. Please contact us for more information.

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility

- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	COMT also known as catechol-O-methyltransferase is an enzyme responsible for the methylation of catechol compounds including neurotransmitters like dopamine epinephrine and norepinephrine. This reaction requires S-adenosylmethionine as a methyl donor. COMT primarily has two forms: a soluble form and a membrane-bound form with masses around 24 kDa and 30 kDa respectively. This protein shows significant expression in the liver brain and kidneys. COMT expression is also noted in cell lines such as HEK293T where it plays an important role in catecholamine metabolism.
Biological function summary	Catechol-O-methyltransferase serves as a regulator of neurotransmitter levels in the central nervous system and peripheral tissues. It does not appear to form part of a larger protein complex functioning mainly as a singular entity for metabolizing catechols. Through its action COMT impacts processes such as mood regulation cognition and stress response. Its role in degrading dopamine is especially significant in regions like the prefrontal cortex where dopamine plays an important role in executive functions.
Pathways	COMT participates in the catecholamine degradation pathway and impacts dopaminergic signaling. It works alongside enzymes such as monoamine oxidase (MAO) to regulate levels of neurotransmitters. COMT's activity influences the synaptic presence of dopamine and its interaction in signaling pathways. Moreover it indirectly affects the balance within the dopaminergic system which is important for normal neurological function and behavior.
Associated diseases and disorders	COMT has links to psychiatric and neurological conditions such as schizophrenia and Parkinson’s disease. Variations in COMT function can affect dopamine metabolism which may contribute to the etiology of these disorders. Additionally proteins like MAO and dopamine transporter (DAT) also connect to COMT through their shared involvement in neurotransmitter regulation. Alterations in COMT

activity can influence disease severity and patient response to treatment underlining its importance in understanding these disorders.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

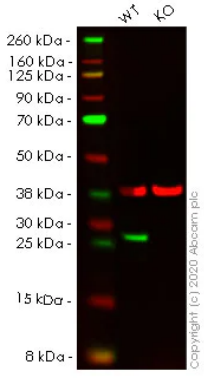
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

1 product image



Western blot - Anti-COMT antibody [EPR6491(B)] - BSA and Azide free (ab248016)

COMT Western blot staining using rabbit Anti-COMT antibody

This data was developed using the same antibody clone in a different buffer formulation (ab124813).
Lanes 1-2: Merged signal (red and green). Green - ab124813 observed at 28 kDa. Red - loading control ab8245 observed at 37 kDa.

ab124813 Anti-COMT antibody [EPR6491(B)] was shown to specifically react with COMT in wild-type HEK-293T cells. Loss of signal was observed when knockout cell line ab266537 (knockout cell lysate ab257396) was used. Wild-type and COMT knockout samples were subjected to SDS-PAGE. ab124813 and Anti-GAPDH antibody [6C5] - Loading Control (ab8245) were incubated overnight at 4°C at 1 in 1000 Dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (ab216776) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-COMT antibody [EPR6491(B)] (ab124813) at 1/1000 dilution

Lane 1:
Wild-type HEK-293T cell lysate at 20 µg

Lane 2:
Western blot - Human COMT knockout HEK-293T cell lysate (ab257396) at 20 µg

Performed under reducing conditions.

Predicted band size: 30 kDa

Observed band size: 28 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.