

# Ces1d (M-14): sc-82554

## BACKGROUND

CES proteins are carboxylesterases which belong to the type-B carboxylesterase/lipase family and are involved in the detoxification of a wide range of xenobiotics. Assisting the body in the detoxification of a wide range of xenobiotics, CES1 and CES2 are involved in hydrolyzing activation of therapeutic ester and amide pro-drugs, as well as in the detoxification of several narcotic compounds. CES3 localizes to the lumen of the endoplasmic reticulum where it functions to catalyze the H<sub>2</sub>O-dependent conversion of carboxylic ester to alcohol and a carboxylate. CES5 is a secreted enzyme found in mammalian kidney and male reproductive fluids. CES6 (carboxylesterase 6) localizes to certain regions of the brain, including the cerebellum, and may participate in detoxification of drugs and xenobiotics in neural tissue and cerebrospinal fluid. Ces1d (carboxylesterase 1D), also known as TGH or Ces3, is a 565 amino acid murine protein belonging to the CES family.

## REFERENCES

- Hosokawa, M., et al. 2007. Genomic structure and transcriptional regulation of the rat, mouse, and human carboxylesterase genes. *Drug Metab. Rev.* 39: 1-15.
- Holmes, R.S., et al. 2008. Opossum carboxylesterases: sequences, phylogeny and evidence for CES gene duplication events predating the marsupial-eutherian common ancestor. *BMC Evol. Biol.* 8: 54.
- Holmes, R.S., et al. 2008. Mammalian carboxylesterase 5: comparative biochemistry and genomics. *Comp. Biochem. Physiol. Part D Genomics Proteomics* 3: 195-204.
- Zhang, L., et al. 2009. Baculo-expression and enzymatic characterization of CES7 esterase. *Acta Biochim. Biophys. Sin.* 41: 731-736.
- Zhang, L., et al. 2009. Identification and characterization of an epididymis-specific gene, Ces7. *Acta Biochim. Biophys. Sin.* 41: 809-815.
- Sanghani, S.P., et al. 2009. Human carboxylesterases: an update on CES1, CES2 and CES3. *Protein Pept. Lett.* 16: 1207-1214.

## CHROMOSOMAL LOCATION

Genetic locus: Ces1d (mouse) mapping to 8 C5.

## SOURCE

Ces1d (M-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Ces1d 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-82554 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

Ces1d (M-14) is recommended for detection of Ces1d of mouse and rat 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); non cross-reactive with family members CES1 or CES2.

Suitable for use as control antibody for Ces1d siRNA (m): sc-72875, Ces1d shRNA Plasmid (m): sc-72875-SH and Ces1d shRNA (m) Lentiviral Particles: sc-72875-V.

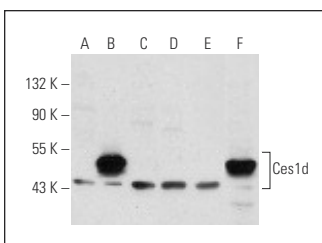
Molecular Weight of Ces1d: 60 kDa.

Positive Controls: Ces1d (m): 293T Lysate: sc-119195 or mouse liver extract: sc-2256.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



Ces1d (M-14): sc-82554. Western blot analysis of Ces1d expression in non-transfected 293T: sc-117752 (A), mouse Ces1d transfected 293T: sc-119195 (B), HeLa (C), WI 38 (D), ES-2 (E) whole cell lysates and mouse liver tissue extract (F).

## RESEARCH USE

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

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Try **Ces1d (B-8): sc-374160**, our highly recommended monoclonal alternative to Ces1d (M-14).