

#### DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Mouse                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects mouse Carboxylesterase 2/CES2 in direct ELISAs and Western blots. In direct ELISAs, approximately 30% cross-reactivity with recombinant human CES2 is observed and approximately 5% cross-reactivity with recombinant mouse (rm) CE                                 |
| <b>Source</b>             | Polyclonal Goat IgG                                                                                                                                                                                                                                                         |
| <b>Purification</b>       | Antigen Affinity-purified                                                                                                                                                                                                                                                   |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant mouse Carboxylesterase 2/CES2<br>Gln27-Lys557 (predicted)<br>Accession # Q91WG0                                                                                                                                             |
| <b>Conjugate</b>          | Alexa Fluor 488<br>Excitation Wavelength: 488 nm<br>Emission Wavelength: 515-545 nm                                                                                                                                                                                         |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

#### APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

**Western Blot** Optimal dilution of this antibody should be experimentally determined.

#### PREPARATION AND STORAGE

**Shipping** The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage** Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

#### BACKGROUND

Carboxylesterase 2 is a member of a large family of carboxylesterases that are responsible for the hydrolysis of ester and amide bonds (1, 2). They have broad substrate specificity ranging from small molecule esters such as phenylester to long-chain fatty acid esters and thioesters. Carboxylesterases play a major role as determinants of pharmacokinetic behavior for most therapeutic agents containing an ester, participating in the detoxification of drugs such as cocaine and heroin in serum and liver. They can also detoxify organophosphate and carbamate analogues used in agrochemicals or chemical nerve agents, such as malathion, sarin, tabun, and VX. Carboxylesterases can also perform transesterification, a reaction important for cholesterol homeostasis. Carboxylesterase deficiency may be associated with non-Hodgkin lymphoma or B-cell lymphocytic leukemia. CES2, also known as acylcarnitine hydrolase M1, shares the serine hydrolase fold observed in other esterases (3). CES2 possesses an endoplasmic reticulum retention signal (HREL) at its C-terminus. The expressed rmCES2 lacks this signal, resulting in its secretion.

#### PRODUCT SPECIFIC NOTICES

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