

## Active Recombinant Human CES2 Protein

**Cat. No.** CES2-107H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant human CES2 protein without tag was expressed in E. coli.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>ProteinLength</b>    | 1-559 aa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Description</b>      | <p>This gene encodes a member of the carboxylesterase large family. The family members are responsible for the hydrolysis or transesterification of various xenobiotics, such as cocaine and heroin, and endogenous substrates with ester, thioester, or amide bonds. They may participate in fatty acyl and cholesterol ester metabolism, and may play a role in the blood-brain barrier system. The protein encoded by this gene is the major intestinal enzyme and functions in intestine drug clearance. Alternatively spliced transcript variants have been found for this gene.</p> |
| <b>Bio-activity</b>     | <p>CES Activity Data(Unless otherwise stated, all assays are carried out at 30 centigrade in 50 mM potassium phosphate buffer (pH 7.4)/acetonitrile, 98/2 (v/v))</p> <p>Substrate: 4-nitrophenyl butyrate</p> <p>Linear with time up to: 5 min(Determined at 90 µM substrate, using a protein concentration of 5 µg/ml)</p> <p>Linear with protein up to: 10 µg/ml(Determined at 90 µM substrate)</p> <p>Vmax: 3586 nmol/min/mg protein</p> <p>Km: 156 µM</p>                                                                                                                             |

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|                       |                                                                           |
|-----------------------|---------------------------------------------------------------------------|
| <b>Usage</b>          | For laboratory (research) purposes only                                   |
| <b>Storage</b>        | Store at -80 centigrade. Avoid frequent temperature changes. Thaw on ice. |
| <b>Concentration</b>  | Protein Concentration: 10 mg/ml                                           |
| <b>Storage Buffer</b> | 50 mM Tris-acetate (pH 7.6), 250 mM sucrose, 0.25 mM EDTA                 |

## GENE INFORMATION

|                        |                                                                                                                                                                                                              |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | CES2 carboxylesterase 2 [ Homo sapiens (human) ]                                                                                                                                                             |
| <b>Official Symbol</b> | CES2                                                                                                                                                                                                         |
| <b>Synonyms</b>        | CES2; carboxylesterase 2; iCE; CE-2; PCE-2; CES2A1; cocaine esterase; carboxylesterase 2 (intestine, liver); intestinal carboxylesterase; liver carboxylesterase-2; methylumbelliferyl-acetate deacetylase 2 |
| <b>Gene ID</b>         | 8824                                                                                                                                                                                                         |
| <b>mRNA Refseq</b>     | NM_001365405                                                                                                                                                                                                 |
| <b>Protein Refseq</b>  | NP_001352334                                                                                                                                                                                                 |
| <b>MIM</b>             | 605278                                                                                                                                                                                                       |
| <b>UniProt ID</b>      | O00748                                                                                                                                                                                                       |

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