

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects human 11 $\beta$ -HSD2 in direct ELISA and Western Blots.                                                                                                                                                                                                           |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>2A</sub> Clone # 921215                                                                                                                                                                                                                           |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                                                                                                                                                                                                  |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant human 11 $\beta$ -HSD2<br>Met105-Arg405<br>Accession # P80365                                                                                                                                                                           |
| <b>Conjugate</b>          | Alexa Fluor 647<br>Excitation Wavelength: 650 nm<br>Emission Wavelength: 668 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.

|                             |                                                                        |
|-----------------------------|------------------------------------------------------------------------|
| <b>Western Blot</b>         | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunohistochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

## PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

## BACKGROUND

The human enzyme HSD-2/11 beta-HSD2 is encoded by the HSD11B2 gene and codes for a 405 aa protein, with high expression in kidney, colon, pancreas and placenta<sup>1</sup>. HSD-2 modulates intracellular glucocorticoid levels by catalyzing the conversion of cortisol to the inactive metabolite cortisone<sup>2</sup>. HSD-2 is abundantly expressed in human placenta and controls fetal glucocorticoid levels to protect the fetus from glucocorticoid exposure. Similarly, HSD-2 expression in the distal nephron protects mineralocorticoid receptors from glucocorticoids and helps regulate blood pressure<sup>3</sup>. Exposure to major environmental pollutant like Cadmium, inhibits activity of HSD-2 which affects the synthesis of glucocorticoids in placenta and thus contribute to developing preeclamptic conditions.

## PRODUCT SPECIFIC NOTICES

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