

#### DESCRIPTION

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|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects human Pappalysin-2/PAPP-A2 in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human PAPP-A is observed.                                                                                                                     |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>2B</sub> Clone # 242011                                                                                                                                                                                                                           |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                                                                                                                                                                                                  |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant human Pappalysin-2/PAPP-A2<br>Ser234-Cys1396<br>Accession # Q9BXP8                                                                                                                                                          |
| <b>Conjugate</b>          | Alexa Fluor 350<br>Excitation Wavelength: 346 nm<br>Emission Wavelength: 442 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>Immunoprecipitation</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

Pappalysins belong to a fifth family of metzincin proteases that consists of ADAMs/ADAMTSs, MMPs, astacins and serrylsins (1, 2). PAPP-A is an important pregnancy protein and increases in plasma by a factor of about 150 during pregnancy as compared to the nonpregnant state. PAPP-A is also a major marker of Down syndrome in the first trimester of pregnancy because maternal serum levels of PAPP-A are significantly reduced when a fetus affected by Down syndrome is present (3). PAPP-A cleaves Insulin-like Growth Factor-Binding Protein-4 and -5 (IGFBP-4 and -5) at a single site, resulting in the release of bioactive IGF (4). Compared to PAPP-A, PAPP-A2 (also called PAPP-E), the second member of the family is less characterized. PAPP-A2 shares 45% amino acid identity to PAPP-A in the mature form, which is synthesized as a preproprotein consisting of multiple domains (1). The prepro region (residues 1-233) and the C-terminal region (residues 1397-1791) are not included in recombinant human PAPP-A2.

#### PRODUCT SPECIFIC NOTICES

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