

#### DESCRIPTION

|                           |   |
|---------------------------|---|
| <b>Species Reactivity</b> | Human   |
| <b>Specificity</b>        | Detects human PADI2 in direct ELISAs.   |
| <b>Source</b>             | Polyclonal Sheep IgG  |
| <b>Purification</b>       | Antigen Affinity-purified   |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant human PADI2<br>Met1-Ala115<br>Accession # Q9Y2J8  |
| <b>Formulation</b>        | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS. |

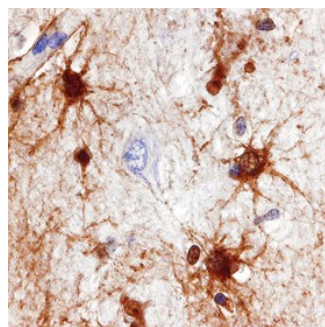
#### APPLICATIONS

**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>Recommended Concentration</b> | <b>Sample</b> |
|-----------------------------|----------------------------------|---------------|
| <b>Immunohistochemistry</b> | 5-15 µg/mL                       | See Below     |

#### DATA

##### Immunohistochemistry



**PADI2 in Human Brain.** PADI2 was detected in immersion fixed paraffin-embedded sections of human Alzheimer's brain (cortex) using Sheep Anti-Human PADI2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7257) at 3 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counter-stained with hematoxylin (blue). Specific staining was localized to glial cells. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

#### PREPARATION AND STORAGE

|                                |  |
|--------------------------------|--|
| <b>Reconstitution</b>          | Sterile PBS to a final concentration of 0.2 mg/mL.   |
| <b>Shipping</b>                | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C   |
| <b>Stability &amp; Storage</b> | <b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul> |

#### BACKGROUND

PADI2 (Protein-arginine deiminase type 2; also PAD2, PDI2 and PAD-H19) is a 72-76 kDa member of the PAD family of proteins. It is widely expressed, being found in macrophages, astrocytes, select neurons, skeletal muscle and bronchial epithelial cells, and keratinocytes. PADI2 catalyzes the Ca<sup>++</sup>-dependent conversion of guanidino groups (NH<sub>2</sub>-C(=NH)-NH<sub>2</sub>) to ureido groups (NH<sub>2</sub>-C(=O)-NH<sub>2</sub>) on peptidylArg, a posttranslational process known as citrullination. Human PADI2 is 665 amino acids (aa) in length. It contains an N-terminal PAD domain (aa 1-114), a middle PAD-M domain (aa 116-274), and a catalytic region (aa 279-665). Over aa 1-115, human PADI2 shares 90% aa sequence identity with mouse PADI2.