**Human alpha-1 PDX Recombinant Protein**

**Catalog Number** RP-070

**Species Reactivity**
- Species reactivity: Human
- Published species: Human, Not Applicable

**Tested Applications**
- Dilution *
  - Control (Ctrl): Assay-dependent
  - Inhibition Assays (IA): Cell studies, 8.0-20 µM

**Published Applications**
- Miscellaneous PubMed (Misc): See 3 publications below
- Neutralization (Neu): See 1 publications below

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### Product specific information

RP-070 was obtained from E. coli transformed with the alpha1-PDX gene. RP-070 can be used in furin inhibition assays. For furin inhibition assays, cells should be treated with 8.0-20 µM alpha1-PDX for 1 hour (see above references). For in vitro assays, 0.1-2.0 µM alpha1-PDX should be used. Purity: >80% (most lots are 80-95%) \(^1\) NOTE: Freezing this product may result in damage of the protein. NOTE: Once rehydrated, this protein retains optimal reactivity for 2-4 days at 4 degrees C. Longer storage time can be achieved by storing in a serum rich medium. RP-070 can be used for protein biochemical, intracellular trafficking, and protein kinetic assays. Molecular weight is approximately 46.7 kDa.

### Background/Target Information

Alpha1-PDX is a potent and selective inhibitor of furin (Ki = 0.6 nM). Alpha1-PDX was engineered by the construction of a variant of alpha1-antitrypsin that contains a minimal furin consensus sequence, RXXR. Cellular expression of alpha1-PDX effectively blocks the furin-dependent processing of protein precursors. In addition, extracellular application of alpha1-PDX can also block the processing of furin substrates. Alpha1-PDX has been shown to inhibit the processing of biologically significant proteins including many viral envelope glycoproteins, bacterial toxins, receptors and growth factors.

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* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.

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3 Miscellaneous PubMed References

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<th>Species / Dilution</th>
<th>Summary</th>
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1 Neutralization References

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<th>Species / Dilution</th>
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<tr>
<td>Human / 78 nM</td>
<td>RP-070 was used in blocking/activating experiment to investigate the function and potential utility of a bioengineered serpin alpha1-Antitrypsin Portland</td>
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