

# a1-MDW Protein

**Catalogue number:** 156501

**Sub-type:** Inhibitor

**Images:**

## Contributor

**Inventor:** Gonzalo Izaguirre

**Institute:** University of Illinois Chicago

**Images:**

## Tool details

**\*FOR RESEARCH USE ONLY**

**Name:** a1-MDW Protein

**Alternate name:** PC, PCSK

**Class:**

**Conjugate:**

**Description:** Furin is a member of the proprotein convertase (PC)<sub>2</sub> family of calcium-dependent serine proteases that have structural homology to subtilisin/kexin-type proteases and are characterized by their recognition of a distinctive P4 Arg-X-Arg/Lys-P1 Arg consensus cleavage site. PCs perform the intracellular and pericellular processing of a large number of peptide and protein precursors transiting the constitutive and regulated protein secretion pathways, including prohormones, growth factors, and their receptors, matrix metalloproteases and integrins. PCs are thus pivotal in the control of cell signaling, proliferation, motility, and adhesion. PC dysfunction is associated with a broad spectrum of diseases, including cancer, autoimmunity, and Alzheimer disease. In addition, a number of significant human infectious organisms take advantage of host PC activity to promote their growth. PCs have been considered promising therapeutic drug targets, and the development of specific inhibitors is being intensely pursued.

**Purpose:**

**Parental cell:**

**Organism:**

**Tissue:**

**Model:**

**Gender:**

**Isotype:**

**Reactivity:**

**Selectivity:**

**Host:**

**Immunogen:**

**Immunogen UNIPROT ID:**

**Sequence:**

**Growth properties:**

**Production details:**

**Formulation:**

**Recommended controls:**

**Bacterial resistance:**

**Selectable markers:**

**Additional notes:** Non-furin specific inhibitor (a1-MDW) is invented by creating chimeric protein containing a1-PDX and Serpin B8 P6-P5 segment with K222Y and L224E mutation. a1-MDW has a 20-60 fold higher reactivity with non-Furin PCs than with furin.

## Target details

**Target:** Non-furin Proprotein Convertases (PC4, PC5, PACE4, and PC7)\_x000D\_

**Target alternate names:**

**Target background:**

**Molecular weight:**

**Ic50:**

## Applications

**Application:**

**Application notes:** Non-furin specific inhibitor (Î?1-MDW) is invented by creating chimeric protein containing Î?1-PDX and Serpin B8 P6-P5 segment with K222Y and L224E mutation. Î?1-MDW has a 20-60 fold higher reactivity with non-Furin PCs than with furin.

## Handling

**Format:**  
**Concentration:**  
**Passage number:**  
**Growth medium:**  
**Temperature:**  
**Atmosphere:**  
**Volume:**  
**Storage medium:**  
**Storage buffer:**  
**Storage conditions:**  
**Shipping conditions:** Dry Ice

## Related tools

**Related tools:**

## References

**References:** Izaguirre et al. 2019. Biochemistry. 58(12):1679-1688. PMID: 30848586.