



## Product Information Sheet

---

|                     |                                                                                                                        |
|---------------------|------------------------------------------------------------------------------------------------------------------------|
| Product Name:       | Mouse Prorenin, recombinant                                                                                            |
| Catalog Number:     | 72174                                                                                                                  |
| Size:               | 20µg                                                                                                                   |
| Concentration:      | 0.5mg/ml                                                                                                               |
| Activity (Unit/µg): | Provided on the label                                                                                                  |
| Unit definition:    | One unit of protease hydrolyzes 1 picomole of mouse renin FRET substrate 5-FAM/QXL™ 520 per minute at pH 7.5 at 25° C. |
| Storage:            | Store at -80°C. Avoid multiple thaw-freeze cycles.                                                                     |

### Instruction:

The renin-angiotensin system (RAS) plays a central role in the regulation of blood pressure and electrolyte homeostasis<sup>1</sup>. An overactive renin-angiotensin system leads to hypertension. As a result, renin is an attractive target for the treatment of this disease<sup>2-4</sup>.

Recombinant mouse prorenin is produced in HEK cells and purified by chelated metal affinity chromatography. It contains an 8x-Histidine tag at the C terminus. The apparent *Mr* of recombinant enzyme on SDS-PAGE is 41.7 kDa. Prorenin, the precursor of renin, is a glycosylated aspartic protease that consists of 2 homologous lobes. Prorenin can be activated with trypsin. Its activity can be measured in a FRET-based enzymatic assay (AnaSpec Cat#72161). 50-100 ng of enzyme is sufficient for FRET-based assay.

Enzyme is stored in 50mM Tris, pH 8.0.

### References

1. He, FJ. and GA. MacGregor, *J. Renin Angiotensin Aldosterone Syst.* **4**, 11 (2003).
2. Wood, JM. et al. *Hypertension*, **7**, 797 (1985).
3. Shibasaki, M. et al. *Am. J. Hypertens.* **4**, 932 (1991).
4. Wood, JM. et al. *Biochem. Biophys. Res. Comm.* **308**, 698 (2003).