

## Active Native Porcine CAPN2 protein

**Cat. No.** CAPN2-22P    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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| <b>Product Overview</b> | Native Porcine CAPN2 purified from porcine kidney.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Species</b>          | Porcine                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Source</b>           | Porcine kidney                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Description</b>      | <p>The two major isoforms, calpain I (-form) and calpain II (m-form), differ in their calcium requirement for activation. Calpain I requires only micromolar amounts of calcium (<math>EC_{50} = 2 \text{ M}</math>), while calpain II requires millimolar amounts (<math>EC_{50} = 1 \text{ mM}</math>). Calpains are heterodimers of 80 kDa and 30 kDa subunits. The 80 kDa unit has the catalytic site and is unique to each isozyme. The 30 kDa unit is a regulatory subunit and common to both calpain I and calpain II. The 80 kDa unit consists of four domains (I-IV). The 30 kDa unit has two domains (V and VI). Domain I is partially removed during autolysis. Domain II is the protease domain. Domain III exhibits a homology with typical calmodulin binding proteins and interacts with calcium binding domains (IV and VI) and frees domain II for protease activity. Domain IV is a calcium binding domain. Domain V contains a hydrophobic region and is essential for calpain interaction with membranes. Domain VI is a calcium binding domain.</p> |
| <b>Form</b>             | Liquid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Bio-activity</b>     | 1000 units/mg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Molecular Mass</b>   | 109000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

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**Stability**

Avoid freeze/thaw. Following initial thaw, aliquot and freeze (-70 centigrade). The enzyme will lose activity upon storage at 4 centigrade.

**Storage**

Store at -80 centigrade.

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