IgA Protease (Igase Pro-Pro-Y-Pro), recombinant

Product Information Sheet
# EP0205

**SUMMARY**

shipped on dry ice; store at -20 °C
Ideal for fusion protein cleavage
For research use only

**Product Description and Application**

- highly efficient specific endoprotease
- cleaves amino acid sequence N-X-Z-Pro-Pro/-Y-Pro-C (X = preferred Pro or Ser; Y = Thr, Ser or Ala; Z = preferred Arg or Thr)
- also cleaves insoluble aggregates derived from inclusion bodies
- used for cleavage of fusion proteins
- natural substrate is IgA1
- since the endoproteinase cleaves the proline-rich hinge region of IgA1 the enzyme is also referred to as Igase or IgA protease 4.

In recombinant protein technology sequence-specific enzymatic cleavage of fusion proteins has become an important application. Endoproteinase Pro-Pro-Y-Pro, a protein of 106 kd, efficiently processes polypeptides at authentic or engineered sites. Since the endoproteinase cleaves the proline-rich hinge region of IgA1, the enzyme is also referred to as Igase or IgA protease 4. Endoproteinase Pro-Pro-Y-Pro recognizes the amino acid sequence N-X-Z-Pro-Pro/-Y-Pro-C (X = preferred Pro or Ser; Y = Thr, Ser or Ala; Z = preferred Arg or Thr). The highly specific proteolysis can be obtained not only with soluble and purified protein fusions but also with insoluble aggregates derived from cytoplasmic inclusion bodies.

**Technical Details**

**Source:** Neisseria gonorrhoeae, cloned and expressed in E. coli.

**Concentration:** Approx. 1000 µg/ml

**Lot#:** 2001102

**Reagent conditions:** For digestion endoproteinase Pro-Pro-Y-Pro is used in the relative amount: endoproteinase Pro-Pro-Y-Pro to fusion protein (substrate) 1:5 to 1:200 by weight, depending on the substrate. Endoproteinase Pro-Pro-Y-Pro can be diluted into reaction buffer before usage. Digestion should be carried out at 15 °C to 37 °C for about 1 - 20 h. For fusion proteins the reaction conditions have to be determined empirically.

**Reaction Buffer:** 20 mM potassium phosphate buffer pH 7.5, 150 mM NaCl and 10 mM EDTA or alternatively, 50 mM Tris, 100 mM NaCl, 1 mM EDTA, pH 7.5.

No activity in the presence of SDS or urea.
Activity/Assay: We obtained a full digestion by incubating 10 µg IgA1 (Sigma) and ca. 0.05 µg Pro-Pro-Y-Pro endoprotease for 18 h at 37 °C in reaction buffer (enzyme/substrate = 1:200 w/w).

Storage Buffer: 50 mM potassium phosphate buffer (pH 7.0) and 50% glycerol.

References
2. R. Halter et al., EMBO J. 8 (1989), 2737 - 2744
3. W. Bachovchin et al., J. Biol. Chem. 265 (1990), 3738 - 3743
4. J. Pohlner et al., Biotechnology Vol. 10 (1992)

Order Information, Shipping and Storage

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<th>Order#</th>
<th>Product</th>
<th>Quantity</th>
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<td>IgA Protease (Igase Pro-Pro-Y-Pro), recombinant</td>
<td>50 µg</td>
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Avoid warming to room temperature since this will reduce the activity. Therefore, the required amount of enzyme should be removed in a fast manner from the tube.

Related Products

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