

PRODUCT INFORMATION

Neutral Protease NB

Cat. No. 30301

General	Neutral protease from <i>Clostridium histolyticum</i> is a proteolytic enzyme and therefore can be used for isolation of various cell types by tissue dissociation.
Description	Neutral Protease NB is chromatographically purified and largely free from collagenolytic activity (PZ U).
Specification	Neutral protease activity ≥ 0.50 U/mg (DMC)
Application	Neutral Protease NB is, mostly in combination with Collagenase NB 1 Premium Grade (Cat. No. 17455) or another Collagenase NB product, suitable for cell isolation from various tissue types. If a GMP conforming product is required, Neutral Protease NB GMP Grade (Cat. No. 30303) is recommended. This product has comparable enzymatic activities to Neutral Protease NB.
Storage conditions	Neutral Protease NB is provided as a lyophilized powder. It should be stored at +2 to +8 °C in a dry environment. Under these conditions the product is stable until the minimum shelf life stated on the certificate of analysis if repeated opening and closing of the vial is avoided. For storage of solutions please refer to "Stock solution".
Documents	For each lot a specific certificate of analysis is provided. A certificate of origin is available.

Instructions for use:

General	Neutral Protease NB is, in combination with Collagenase NB 1 Premium Grade, especially suited for isolation of islets of Langerhans from human pancreas, and also for cell isolation from several other human or animal tissues.
Tissue dissociation	<p>Recommended starting concentrations for isolation of islets of Langerhans from human pancreas:</p> <p>Collagenase NB 1 Premium Grade: 15 – 20 PZ U/g tissue</p> <p>Neutral Protease NB: 0.8 – 1.5 DMC U/g tissue</p> <p>Neutral Protease NB is provided in vials with 50 DMC U or 100 DMC U.</p> <p>In general, the appropriate neutral protease concentration depends on tissue type and origin as well as on the isolation procedure.</p> <p>Neutral protease activity is at an optimum at 37 °C.</p>
Stock solution	<p>A stock solution of Neutral Protease NB is prepared by dissolving the enzyme in water. The enzyme solution must be constantly stored on ice.</p> <p>Since neutral protease depends on calcium, absolutely no calcium chelating agents (e.g. EDTA) should be present at all.</p> <p>Reconstituted Neutral Protease NB can be 0.22 µm filtered, aliquoted and stored at -20 °C. Aliquots are stable for 1 year if repeated freezing and thawing is avoided.</p> <p>For 0.22 µm filtration filters with low protein-binding properties (e.g. cellulose acetate, PVDF, or PES) are recommended.</p>
Working solution	<p>To prepare a working solution, the stock solution is diluted with water to achieve the required neutral protease concentration. The working solution must be constantly stored on ice until use.</p> <p>If Neutral Protease NB solution is mixed with Collagenase NB solution, the blend should be used immediately.</p>
Inactivation and inhibitors	<p>The dissociation process can be reduced, e.g. by cooling down or dilution of the enzyme solution.</p> <p>Inhibitors of neutral protease include chelating agents like EDTA.</p>
Important note	Neutral Protease NB is not intended for direct application in humans.