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Proteinase K

From *Tritirachium album*

Tissue fixation in formalin or other aldehyde solutions forms protein cross-links that mask the antigenic sites. This causes weak or false negative staining for immunohistochemical detection of certain proteins. The proteinase K based solution is designed to break the protein cross-links, therefore unmask the antigens and epitopes in formalin-fixed and paraffin embedded tissue sections, thus enhancing staining intensity of antibodies.

Proteinase K is a non-specific serine protease with a very high specific activity. It is therefore ideally suited for proteolytic digestion of formalin-fixed tissues. Proteinase K is active in the presence or absence of SDS, EDTA or urea.

Product Number:	T-3401
Quantity:	40mg enzyme in 2ml solution
Concentration:	20mg/ml Supplied as liquid solution in 20mM Tris/HCl (pH 7.4), 1mM CaCl ₂ , 50% glycerol.
Specific Activity:	30 units/mg.
Stability:	Original vial: 1 year at -20°C Can be stored at -20°C with the enzyme in liquid form.
Applications:	Tested for immunohistochemistry (IHC); has been described to work with ISH techniques. Approximate working dilution for IHC: 1:50 diluted in 20mM Tris/HCl pH 8.0. The time required for optimal digestion of formalin-fixed tissues usually varies with the extent of fixation. Generally, three to six minutes (up to fifteen minutes) at room temperature is sufficient. Over- digestion may result in loss of tissue morphology or cause sections to detach from slides. Optimal dilutions and incubation times should be determined by the end user.
Source:	Tritirachium album.

Selected reference

Anson, M.L.: J. Gen. Physiol. **22**, 79 (1939).

For in vitro research only.