

## Technical Data Sheet

## Retrievagen A (pH 6.0)

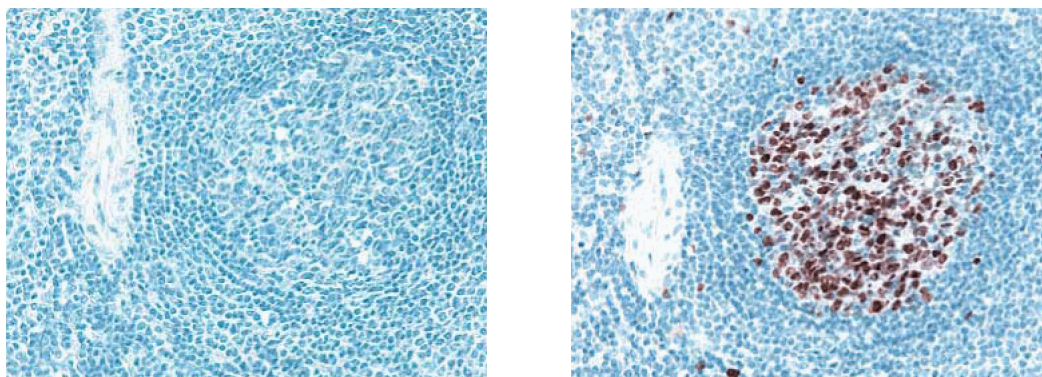
## Product Information

<b>Material Number:</b>	<b>550524</b>
<b>Component:</b>	<b>51-7540KC</b>
<b>Description:</b>	Retrievagen A Solution 1
<b>Size:</b>	25 ml (1 ea)
<b>Component:</b>	<b>51-7541KC</b>
<b>Description:</b>	Retrievagen A Solution 2
<b>Size:</b>	100 ml (1 ea)

## Description

BD Retrievagen A (pH 6.0) is an antigen retrieval system that is recommended for Zinc-fixed and Formalin-fixed paraffin embedded tissue sections that show sub-optimal or no reactivity with antibodies for immunohistochemical staining. 10% neutral buffered formalin fixes the tissue by cross-linking proteins that may cause a conformational change or "masking" of the antigenic epitope leading to reduced or absent antibody reactivity. The BD Retrievagen A (pH 6.0) is designed to unmask the epitope and cause the enhancement of antibody staining. The proposed mechanism by which most of the antigen retrieval systems work is through breaking the cross-linking bonds formed between the protein molecules.

It is important to realize that in spite of antigen retrieval, some antibodies do not stain on formalin-fixed paraffin embedded sections. In these situations fixing the tissue in a less harsh fixative like the IHC zinc fixative developed by BD Pharmingen (Cat. No. 550523) may be helpful. In many cases our zinc-fixative preserves the epitope leading to good antibody staining at the same time depicting good tissue morphology. However, there are a few antigens that are not preserved by any gentle fixation, and in these situations use of fresh frozen tissue for immunohistochemical staining is the only alternative.



**Antigen retrieval by BD Pharmingen Retrievagen A (pH 6.0):** Formalin-fixed paraffin sections of normal human tonsil were either untreated (left panel) or pre-treated with BD Retrievagen A (pH 6.0) (right panel) and then stained with the anti-Ki-67 antibody. Note the absence of antibody staining in the untreated versus the panel where antigen retrieval solution was used.

## Preparation and Storage

Store undiluted at 4°C.

## Application Notes

## Recommended Assay Procedure:

BD Pharmingen Retrievagen A (pH 6.0) is provided as two separate solutions that need to be mixed. Take 18 ml of BD Retrievagen A solution 1 and 82 ml of BD Retrievagen solution 2 and bring up the volume to 1 litre with distilled water. The pH of the final working solution should be around 6.0. This working solution can be stored at 4° C for up to a month. Antigen retrieval protocol is performed after deparaffinizing the slides as outlined below.

1. Deparaffinize slides (after drying thoroughly overnight at RT) in 2 changes of xylene for 10 min each.
2. Wash slides in 100% alcohol twice for 2 min each.

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3. Block endogenous peroxidase activity by incubating for 10 min in 3% H<sub>2</sub>O<sub>2</sub>. Rinse 2-3 times in water.
4. Place slides in a plastic coplin jar or staining dish with the BD Retrieval A working solution and heat to 193°F in a microwave.
5. Mix the solution and incubate the slides at the desired temperature of 193°F for 10 min.
6. Remove the staining dish, cover and allow the slides to slowly cool to room temperature for 20 min.
7. Wash slides with 2-3 changes of water and continue with the blocking with normal serum and application of the primary antibody.

#### **Product Notices**

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to [www.bdbiosciences.com/pharmingen/protocols](http://www.bdbiosciences.com/pharmingen/protocols) for technical protocols.

#### **References**

- Chan JK. Advances in immunohistochemical techniques: toward making things simpler, cheaper, more sensitive, and more reproducible. *Adv Anat Pathol.* 1998; 5(5):314-325.(Biology)
- Pileri SA, Roncador G, Ceccarelli C, et al. Antigen retrieval techniques in immunohistochemistry: comparison of different methods. *J Pathol.* 1997; 183(1):116-123. (Biology)
- Shi SR, Key ME, Kalra KL. Antigen retrieval in formalin-fixed, paraffin-embedded tissues: an enhancement method for immunohistochemical staining based on microwave oven heating of tissue sections. *J Histochem Cytochem.* 1991; 39(6):741-748.(Biology)