I.E.D. Unit (Ion-Exchange Decal Unit)

Ancillary Reagent
901-IED1203/1204-073117

BIOCARE MEDICAL

Catalog Number: **IED1203, 1204**

Description: 140, 1000 ml, Ready-to-use

Intended Use:

For In Vitro Diagnostic Use
I.E.D. Unit is an ancillary reagent that is intended for laboratory use as a decalcification system that removes calcium from bone quickly while leaving superior cellular detail. The clinical interpretation of any staining or its absence should be complemented by morphological studies using proper controls and should be evaluated within the context of the patient's clinical history and other diagnostic tests by a qualified pathologist.

Summary & Explanation:

Ion-exchange is a process by which one type of ion is absorbed into a solid material and replaced by an equivalent quantity of another ion of the same charge. The I.E.D. Unit incorporates a strong cation ion-exchange resin in a weak acid solution to remove calcium ions from bone, while replacing them with hydrogen ions. This advanced decalcification system removes calcium from bone quickly while leaving superior cellular detail. The ion-exchange process does not require strong concentrated acid solutions as in traditional decalcification methods; so delicate cellular structures remain intact. This can be very important for immunohistochemistry (IHC) procedures, especially for bone marrow. Over decalcification can destroy morphology that may affect the final staining quality and staining intensity for IHC staining. The ion exchange decal method has been shown to provide the best tissue morphology and IHC staining when compared to other conventional decal methods. Results were very similar to EDTA methods, but much faster. Tissues can remain in the I.E.D. solution for longer periods of time without destroying tissue morphology, eliminating the daily solution change, thus reducing the amount of toxic waste.

Known Applications:

Immunohistochemistry (formalin-fixed paraffin-embedded tissues)

Supplied As:

Ready-to-use

Materials and Reagents Needed But Not Provided:

Microscope slides, positively charged
Desert Chamber* (Drying oven)
Positive and negative tissue controls
Xylene (Could be replaced with a xylene substitute*)
Ethanol or reagent alcohol
Decloaking Chamber* (Pressure cooker)
Deionized or distilled water
Wash buffer*(TBS/PBS)
Pretreatment reagents*
Enzyme digestion*
Avidin-Biotin Blocking Kit* (Labeled streptavidin kits only)
Peroxidase block*
Protein block*
Primary antibody*
Negative control reagents*
Detection kits*
Detection components*
Chromogens*
Hematoxylin*
Bluing reagent*
Mounting media*

* Biocare Medical Products: Refer to a Biocare Medical catalog for further information regarding catalog numbers and ordering information. Certain reagents listed above are based on specific application and detection system used.

Storage and Stability:

Store at room temperature. Do not use after expiration date printed on vial. If reagents are stored under conditions other than those specified in the package insert, they must be verified by the user. Diluted reagents should be used promptly; any remaining reagent should be stored at room temperature.

Protocol Recommendations:

1. Bone marrow cores must be fixed approximately 4 to 24 hours, and then washed 5 minutes in running water.
2. Place bone marrow core biopsy in the I.E.D. unit solution for 2-3 hours. If possible, gentle agitation or low heat (37°C) on an orbital shaker will speed up the process. When decalcification is complete, wash tissue for 5 minutes in running tap water.
3. Process in the usual manner.

Protocol Notes:

1. All cation exchange resins will have color changes, and the endstage is usually a reddish brown. This is a normal color variation. The cosmetic color of resins is not indicative of the resin's quality or activity. It has to do with the chemical process and how the natural chromophores in the resin line up. Thus, the color can vary from light tan to reddish brown, or even grey to black.

Limitations:

The protocols for a specific application can vary. These include, but are not limited to: fixation, heat-retrieval method, incubation times, tissue section thickness and detection kit used. Due to the superior sensitivity of these unique reagents, the recommended incubation times and titers listed are not applicable to other detection systems, as results may vary. The data sheet recommendations and protocols are based on exclusive use of Biocare products. Ultimately, it is the responsibility of the investigator to determine optimal conditions. The clinical interpretation of any positive or negative staining should be evaluated within the context of clinical presentation, morphology and other histopathological criteria by a qualified pathologist. The clinical interpretation of any positive or negative staining should be complemented by morphological studies using proper positive and negative internal and external controls as well as other diagnostic tests.

Quality Control:

Refer to CLSI Quality Standards for Design and Implementation of Immunohistochemistry Assays; Approved Guideline-Second edition (I/LA28-A2). CLSI Wayne, PA, USA (www.clsi.org). 2011

Precautions:

1. Specimens, before and after fixation, and all materials exposed to them, should be handled as if capable of transmitting infection and disposed of with proper precautions. Never pipette reagents by mouth and avoid contacting the skin and mucous membranes with reagents and specimens. If reagents or specimens come in contact with sensitive areas, wash with copious amounts of water. **Do not heat this solution beyond 37°C.**
2. Microbial contamination of reagents may result in an increase in nonspecific staining.

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IVD CE

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Precautions Cont'd:

3. Incubation times or temperatures other than those specified may give erroneous results. The user must validate any such change.
4. The MSDS is available upon request and is located at http://biocare.net/support/msds.
5. Consult OSHA, federal, state or local regulations for disposal of any toxic substances.

Quality Control:

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Troubleshooting:

Follow the reagent specific protocol recommendations according to data sheet provided. If atypical results occur, contact Biocare's Technical Support at 1-800-542-2002.

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