



AEC Single Solution

REF / Cat. No.: **ZUC037-008** **8 ml** **80 tests**
ZUC037-100 **100 ml** **1000 tests**

Instructions for use

Intended use

AEC Single Solution is a ready-to-use solution intended for immunohistochemical and *in situ*-hybridisation staining procedures with horse radish peroxidase (HRP). AEC (3-Amino-9-ethylcarbazol) leads to the formation of a red-brown precipitate at the location of the target antigen or target nucleic acid.

The precipitate is insoluble in aqueous mounting media and can be observed by light microscopy. AEC Single Solution is especially useful when a high sensitivity is desired.

AEC Single Solution is intended for *in vitro* diagnostic use.

Reagents provided

REF / Cat. No. **ZUC037-008**
8 ml **AEC Single Solution (ready-to-use)**

REF / Cat. No. **ZUC037-100**
100 ml **AEC Single Solution (ready-to-use)**
2 **Dropper Bottles**

Storage and Handling

The solution should be stored at 2-8°C without further dilution. Please store the reagent in a dark place and do not freeze it. Under these conditions the solution is stable up to the expiry date indicated on the label. Do not use product after the expiry date.

AEC Single Solution is a ready-to-use solution. Preparation of a working solution as in other chromogenic substrates is not necessary.

A positive and a negative control have to be carried out in parallel to the test material. If you observe unusual staining or other deviations from the expected results which could possibly be caused by the kit reagents please contact Zytomed Systems' technical support or your local distributor.

Precautions

Use by qualified personnel only.

AEC (3-Amino-9-ethylcarbazol) and the solvents used are considered hazardous materials. Material safety data sheets (MSDS) are available upon request.

Wear protective clothing to avoid contact of reagent or specimen with eye, skin or mucous membrane. In case of reagent or specimen coming into contact with a sensitive area, wash the area with large amounts of water.

Oxidising substances, e. g. metals, dust, bacteria or glass devices can influence the stability of AEC Single Solution. Such contaminations have to be avoided. Non-consumed solution needs to be discarded as dangerous substance.

Reagent Preparation

The solution is ready-to-use.

AEC Single Solution can be used directly from the refrigerator and should be stored again at 2-8°C after use.

When using the small package (8 ml ZUC037-008) please directly drop from the bottle.

When using the 100 ml package (ZUC037-100) please transfer up to 8 ml of the AEC Single Solution into one of the provided dropper bottles. The transferred solution is stable for many weeks if stored at 2-8°C. The volume required for several staining runs should be transferred so that the 100 ml stock bottle has to be opened only a few times.

If you would like to pipette the solution use a clean vial from which you pipette. Remaining quantities should not be filled back into the bottle but disposed as hazardous material.

Staining procedure

- 1) Rinse the slide with wash buffer after the previous incubation step.
- 2) Apply the AEC Single Solution to the slide. Incubate for 3-6 minutes.
(Incubation time can be extended up to 30 minutes, if desired.)
- 3) Rinse with distilled H₂O.
- 4) Counterstain with haematoxylin for about 30 seconds up to 5 minutes (depending on the desired staining intensity).
- 5) Rinse with distilled H₂O.
- 6) Blueing in tap water for at least 5 minutes.
- 7) Mount with an aqueous mounting medium.

Quality control

We recommend carrying out a positive and a negative control with every staining run. The positive control permits the validation of appropriate processing of the sample. If the negative control has a positive result, this points to unspecific staining. Please refer to the instructions of the detection system for guidance on general quality control procedures.

Troubleshooting

If you observe unusual staining or other deviations from the expected results please read these instructions carefully, contact Zytomed Systems' technical support or your local distributor. Also refer to the instructions of the detection systems for guidance on general troubleshooting.

Expected results

During the reaction of the substrate with horse radish peroxidase in presence of the chromogen AEC, a red-brown precipitate is formed at the location of the target antigen or nucleic acid. The precipitate is insoluble in aqueous solvents and can be observed by light microscopy.

Limitations of the procedure

Immunohistochemistry is a complex method in which histological as well as immunological detection methods are combined. Tissue processing and handling prior to immunostaining, for example variations in fixation and embedding or the inherent nature of the tissue can cause inconsistent results (Nadji and Morales, 1983). In some tissues endogenous peroxidase activity may cause non-specific staining. The enzyme activity should be blocked by incubation with hydrogen peroxide solution (H₂O₂ solution, Cat. No. ZUC019). The step is carried out before incubation with primary antibody but after dewaxing and rehydration. Background staining due to endogenous biotin can be blocked through an avidin-biotin blocking step prior to the primary antibody incubation step.

The coloured precipitate formed by AEC is soluble in organic solvents. The tissue sections therefore have to be counterstained with aqueous solutions (e. g. Gill's or Mayer's haematoxylin) and mounted with aqueous mounting media (Cat. No ZY-AMT030). The colour intensity of the reaction product can decrease with time, especially when exposed to light. The staining reaction itself can be influenced in the same way when carried out in strong light. Zytomed Systems guarantees that the product will meet all requirements described from its shipping date until its expiry date, as long as the product is correctly stored and utilized. No additional guarantees can be given. Under no circumstances shall Zytomed System be liable for any damages arising out of the use of the reagent provided.

Performance characteristics

Zytomed System has conducted studies to evaluate the performance of the kit reagents in combination with standard detection systems. The product has been found to be suitable for the intended use.









Bibliography

Elias JM "Immunohistopathology – A practical Approach to Diagnosis" ASCP Press 2003
Nadji M and Morales AR Ann N.Y. Acad Sci 420:134-9, 1983

31 October 2013

ZUC037-008_ZUC037-100_AEC Single Solution_A1013_english

Explanation of the symbols on the product label:

REF	Bestellnummer Catalog Number Reference du catalogue		Verwendbar bis Use By Utiliser jusque		Gebrauchsanweisung beachten Consult Instructions for use Consulter les instructions d'utilisation
LOT	Chargenbezeichnung Batch Code Code du lot		Lagerungstemperatur Temperature Limitation Limites de température	RUO	Nur für Forschungszwecke For Research Use Only Pour la recherche uniquement
IVD	In vitro Diagnostikum In Vitro Diagnostic Medical Device Dispositif médical de diagnostic in vitro		Achtung/Gefahr Warning/Danger Attention/Danger		Hersteller / Manufacturer / Fabricant Zytomed Systems GmbH Anhalterstraße 16 14163 Berlin, Germany Tel: (+49) 30-804 984 990 www.zytomed-systems.de
	Achtung/Gefahr Warning/Danger Attention/Danger		Achtung Warning Attention		Gefahr Danger Danger