

Annexin VII Control Slides



Intended Use

For In Vitro Diagnostic Use.

Summary and Explanation

Annexin VII (or Annexin A7) is a Ca^{2+} -dependent and phospholipid-binding protein. It is encoded by the ANX7 gene, which is located in human chromosome 10q21. It is a member of the annexin protein family, which regulates various endomembrane processes including vesicle fusion, segregation, and compartmentalization and is implicated in plasma membrane repair mechanisms.

Studies suggest that ANX7 is a tumor suppressor gene and it was found that Annexin VII is associated with several types of cancers, such as Prostate, Breast, Liver, and Gastric cancer. IHC analysis showed that a low or the loss of expression of ANX7 correlates with Prostate cancer progression. On the contrary, high levels of ANX7 expression were found in Metastatic Breast Tumors and that HER2-Negative patients suffer increased risk of death when ANX7 expression levels are elevated. Another study found that ANX7 predominantly shows low expression in other cancer types, such as Colon Adenocarcinoma or Bladder Transitional Cell Carcinoma. A study identified the prognostic impact of ANXA7 in Prostate Cancer using tissue microarrays, identified ANXA7 as a new prognostic factor and indicated a bimodal correlation to tumor progression. Another study concluded that Annexin A7 expression was able to inhibit HCC lymph node metastasis, whereas knockdown of Annexin A7 expression significantly induced HCC metastasis to local lymph nodes.

Presentation

Five slides of Annexin VII positive tissues, each mounted on Hydrophilic Plus Slides, provided in a plastic mailer.

Catalog No.	Quantity
BSB-9018-CS	5 slides
BSB-3709-CS	5 slides

Storage Store at 20-25°C

Precautions

1. For professional users only. Results should be interpreted by a qualified medical professional.
2. Ensure proper handling procedures are used with this reagent.
3. Always wear personal protective equipment such as a laboratory coat, goggles, and gloves when handling reagents.
4. Dispose of unused solution with copious amounts of water.
5. Follow safety precautions of the heating device used for epitope retrieval (TintoRetriever Pressure Cooker or similar).
8. For additional safety information, refer to Safety Data Sheet for this product.
9. For complete recommendations for handling biological specimens, please refer to the CDC document, "Guidelines for Safe Work Practices in Human and Animal Medical Diagnostic Laboratories" (see References in this document).

Stability

This product is stable up to the expiration date on the product label.

Do not use after expiration date listed on package label.

IHC Protocol

1. Subject tissues to heat induced epitope retrieval (HIER) using a suitable retrieval solution such as ImmunoDNA Retriever with Citrate (BSB 0020-BSB 0023) or EDTA (BSB 0030-BSB 0033).

2. Any of three heating methods may be used:

a. TintoRetriever Pressure Cooker or Equivalent

Place tissues/slides in a staining dish or coplin jar containing the ImmunoDNA Retriever with Citrate or EDTA and place on trivet in the pressure cooker. Add 1-2 inches of distilled water to the pressure cooker and turn heat to high. Incubate for 15 minutes. Open and immediately transfer slides to room temperature.

b. TintoRetriever PT Module or Water Bath Method

Place tissues/slides in a pre-warmed staining dish or coplin jar containing the ImmunoDNA Retriever with Citrate or EDTA at 95°-99° C. Incubate for 30-60 minutes.

c. Conventional Steamer Method

Place tissues/slides in a pre-warmed staining dish or coplin jar containing the ImmunoDNA Retriever with Citrate or EDTA in a steamer, cover and steam for 30-60 minutes.

3. After heat treatment, transfer slides in ImmunoDNA Retriever with Citrate or EDTA to room temperature and let stand for 15-20 minutes.
4. For manual staining, perform antibody incubation at ambient temperature. For automated staining methods, perform antibody incubation according to instrument manufacturer's instructions.
5. Wash slides with ImmunoDNA washer or DI water.
6. Continue IHC staining protocol. Wash slides between each step with ImmunoDNA washer solution.

Abbreviated Immunohistochemical Protocol

Step	ImmunoDetector AP/HRP	PolyDetector AP/HRP	PolyDetector Plus HRP
Peroxidase/AP Blocker	5 min.	5 min.	5 min
Primary Antibody	30-60 min.	30-60 min.	30-60 min.
1st Step Detection	10 min.	30-45 min.	15 min.
2nd Step Detection	10 min.	Not Applicable	15 min.
Substrate- Chromogen	5-10 min.	5-10 min.	5-10 min.
Counterstain / Coverslip	Varies	Varies	Varies

Abbreviated IF Protocol

Step	Incubation Time
Rinse slides in IF wash buffer	5 minutes
Drain and wipe excess IF wash buffer off slide	
Conduct remaining steps in the dark	
Apply Antibody	30-60 minutes
Rinse with 3 changes of IF wash buffer	3x15 minutes each
Coverslip with IF mounting medium	

Mounting Protocols

For detailed instructions using biodegradable permanent mounting media such as XyGreen PermaMouter (BSB 0169-0174) or organic solvent based resin such as PermaMouter (BSB 0094-0097), refer to PI0174 or PI0097.





Product Limitations

Due to inherent variability present in immunohistochemical procedures (including fixation time of tissues, dilution factor of antibody, retrieval method utilized, and incubation time), optimal performance should be established through the use of positive and negative controls. Results should be interpreted by a qualified medical professional.

References

1. Srivastava M, Bubendorf L, Srikantan V, et al. ANX7, a candidate tumor suppressor gene for prostate cancer. Proc Natl Acad Sci U S A. 2001;98(8):4575-4580. doi:10.1073/pnas.071055798
2. Sønder SL, Boye TL, Tölle R, et al. Annexin A7 is required for ESCRT III-mediated plasma membrane repair. Sci Rep. 2019;9(1):6726. Published 2019 Apr 30. doi:10.1038/s41598-019-43143-4
3. Srivastava M, Bubendorf L, Raffeld M, et al. Prognostic impact of ANX7-GTPase in metastatic and HER2-negative breast cancer patients. Clin Cancer Res. 2004;10(7):2344-2350. doi:10.1158/1078-0432.ccr-03-0278
4. Guo C, Liu S, Greenaway F, Sun MZ. Potential role of annexin A7 in cancers. Clin Chim Acta. 2013;423:83-89. doi:10.1016/j.cca.2013.04.018
5. Srivastava M, Torosyan Y, Raffeld M, Eidelman O, Pollard HB, Bubendorf L. ANXA7 expression represents hormone-relevant tumor suppression in different cancers. Int J Cancer. 2007;121(12):2628-2636. doi:10.1002/ijc.23008
6. Leighton X, Bera A, Eidelman O, et al. Tissue microarray analysis delineate potential prognostic role of Annexin A7 in prostate cancer progression. PLoS One. 2018;13(10):e0205837. Published 2018 Oct 15. doi:10.1371/journal.pone.0205837
7. U.S. Department of Health and Human Services: Centers for Disease Control and Prevention. Guidelines for Safe Work Practices in Human and Animal Medical Diagnostic Laboratories. Supplement / Vol. 61, January 6, 2012. <https://www.cdc.gov/mmwr/pdf/other/su6101.pdf>

Symbol Key / Légende des symboles/Erläuterung der Symbole

EC REP	EMERGO EUROPE Prinsessegracht 20 2514 AP The Hague The Netherlands	 Storage Temperature Limites de température Zulässiger Temperaturbereich	 Manufacturer Fabricant Hersteller	REF	Catalog Number Référence du catalogue Bestellnummer
IVD	In Vitro Diagnostic Medical Device Dispositif médical de diagnostic in vitro In-Vitro-Diagnostikum	 Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten	 Expiration Date Utiliser jusque Verwendbar bis	LOT	Lot Number Code du lot Chargenbezeichnung