

CXCR5/CD185 Control Slides



Intended Use

For In Vitro Diagnostic Use.

Summary and Explanation

The G-protein coupled receptor or C-X-C motif chemokine receptor 5, CXCR5, also known as or Burkitt lymphoma receptor 1, plays fundamental roles in inflammatory, infectious and immune responses. Current evidence also indicates that the CXCL13:CXCR5 axis orchestrates cell-cell interactions that regulate lymphocyte infiltration within the tumor microenvironment, thereby determining responsiveness to cytotoxic and immune-targeted therapies. CXCR5 is expressed in mature B-cells and Burkitt's lymphoma. This cytokine receptor binds to B-lymphocyte chemoattractant, and is involved in B-cell migration into B-cell follicles of spleen and Peyer patches. CXCR5 is highly expressed in primary and secondary follicles within gastric lymphomas. non-small cell lung cancer tissues express CXCR5, which correlates with stage/grade of the disease. Higher CXCR5 expression and migration by non-small cell lung cancer cells suggest a role in migration and metastasis of primary lung tumors in response to CXCL13. These findings indicate that differential expression patterns of CXCR5 and CXCL13 in two subtypes (squamous cell carcinoma and adenocarcinoma) of non-small cell lung cancer cells are associated with differences in their prognosis and survival. It has been proposed that CXCR5/CXCL13, either alone or in combination, could be used as a prognostic biomarker for lung cancer. Other studies have shown that CXCR5 overexpression in breast cancer patients highly correlates with lymph node metastases, and elevated CXCR5 expression may contribute to abnormal cell survival and migration in breast tumors that lack functional p53 protein. Another study has indicated that prostate cancer tissue as well as cell lines express higher non-basal levels of CXCR5 and found a correlation between the level of CXCR5 and Gleason score. CXCR5 location was additionally considered and higher Gleason scores correlated with nuclear CXCR5 while cytoplasmic and membrane CXCR5 correlated with benign and early prostate cancers.

Presentation

Five slides of CXCR5/CD185 positive tissues, each mounted on Hydrophilic Plus Slides, provided in a plastic mailer.

<i>Catalog No.</i>	<i>Quantity</i>
BSB-9128-CS	5 slides
BSB-3721-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 PermaMunter (BSB 0169-0174) or organic solvent based resin such as PermaMunter (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. Kazanietz MG, Durando M, Cooke M. CXCL13 and Its Receptor CXCR5 in Cancer: Inflammation, Immune Response, and Beyond. Front Endocrinol (Lausanne). 2019;10:471. Published 2019 Jul 12. doi:10.3389/fendo.2019.004712. Singh R, Gupta P, Kloecker GH, Singh S, Lillard JW Jr. Expression and clinical significance of CXCR5/CXCL13 in human non-small cell lung carcinoma. Int J Oncol. 2014;45(6):2232-2240. doi:10.3892/ijo.2014.26883. Biswas S, Sengupta S, Roy Chowdhury S, et al. CXCL13-CXCR5 co-expression regulates epithelial to mesenchymal transition of breast cancer cells during lymph node metastasis [published correction appears in Breast Cancer Res Treat. 2016 Feb;155(3):615-6]. Breast Cancer Res Treat. 2014;143(2):265-276. doi:10.1007/s10549-013-2811-84. Mitkin NA, Hook CD, Schwartz AM, et al. p53-dependent expression of CXCR5 chemokine receptor in MCF-7 breast cancer cells. Sci Rep. 2015;5:9330. Published 2015 Mar 19. doi:10.1038/srep093305. Singh S, Singh R, Singh UP, et al. Clinical and biological significance of CXCR5 expressed by prostate cancer specimens and cell lines. Int J Cancer. 2009;125(10):2288-2295. doi:10.1002/ijc.245746. 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 QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden	 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