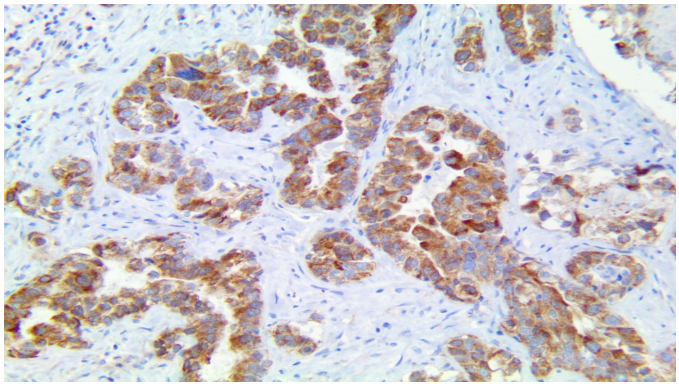
# CXCR5/CD185

**Clone:** Polyclonal
Rabbit Polyclonal

CE IVD



*Inset: IHC of CXCR5/CD185 on a FFPE Lung Adenocarcinoma Tissue*

**Intended Use**
For In Vitro Diagnostic Use.

This antibody is intended for use in Immunohistochemical applications on formalin-fixed paraffin-embedded tissues (FFPE), frozen tissue sections, and cell preparations. Interpretation of results should be performed by a qualified medical professional.

**Immunogen**
Recombinant human CXCR5 protein.

**Summary and Explanation**
The G-protein coupled receptor (GPCR) or C-X-C motif chemokine receptor 5, CXCR5, also known as or Burkitt lymphoma receptor 1 (BLR1), 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 (BLC), 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 (NSCLC) tissues express CXCR5, which correlates with stage/grade of the disease. Higher CXCR5 expression and migration by NSCLC 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 NSCLC 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.

| | | | |
|---|---|---|---|
| **Antibody Type** | Rabbit Polyclonal | **Clone** | Polyclonal |
| **Isotype** | IgG2b | **Reactivity** | Paraffin, Frozen |
| **Localization** | Cytoplasmic, Membranous | **Species Reactivity** | Human |
| **Control** | Placenta, Brain, Lung, Transitional Cell Carcinoma, Testis, Ovarian Serous Carcinoma, Hepatocellular Carcinoma | | |
| **Application** | Lymphomas, Lung Cancer | | |

**Presentation**
Anti-CXCR5/CD185 is a purified immunoglobulin fraction of rabbit antiserum that is filter sterilized and diluted in buffer pH 7.5, containing BSA and sodium azide as a preservative.

| *Catalog No.* | *Presentation* | *Dilution* | *Volume* |
|---|---|---|---|
| BSB-3721-3 | Predilute | Ready-to-Use | 3.0 mL |
| BSB-3721-7 | Predilute | Ready-to-Use | 7.0 mL |
| BSB-3721-15 | Predilute | Ready-to-Use | 15.0 mL |
| BSB-3721-01 | Concentrate | 1:25-1:100 | 0.1 mL |
| BSB-3721-05 | Concentrate | 1:25-1:100 | 0.5 mL |
| BSB-3721-1 | Concentrate | 1:20-1:100 | 1.0 mL |

**Control Slides Available**

| *Catalog No.* | *Quantity* |
|---|---|
| BSB-3721-CS | 5 slides |

**Storage** Store at 2-8°C (Control Slides: Store at 20-25°C)

**Precautions**
1. For professional users only. Results should be interpreted by a qualified medical professional.
2. This product contains <0.1% sodium azide ($NaN_3$) as a preservative. 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. Do not ingest reagent. If reagent is ingested, seek medical advice immediately.
6. Avoid contact with eyes. If contact occurs, flush with large quantities of water.
7. 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 the package label. Temperature fluctuations should be avoided. Store appropriately when not in use, and avoid prolonged exposure to room temperature conditions.

**Specimen Preparation**

**Paraffin sections:** The antibody can be used on formalin-fixed paraffin-embedded (FFPE) tissue sections. Ensure tissue undergoes appropriate fixation for best results. Pre-treatment of tissues with heat-induced epitope retrieval (HIER) is recommended using Bio SB ImmunoDNA Retriever with Citrate (BSB 0020-BSB 0023), ImmunoDNA Retriever with EDTA (BSB 0030-BSB 0033), or ImmunoDNA Digestor (BSB 0108-0112). See reverse side for complete protocol. Tissue should remain hydrated via use of Bio SB Immuno/DNA Washer solutions (BSB 0029 & BSB 0042).

**Frozen sections and cell preparations:** The antibody can be used on acetone-fixed frozen sections and acetone-fixed cell preparations.

**IHC Protocol**

1. Cut and mount 3-5 micron formalin-fixed paraffin-embedded tissues on positively charged slides such as Bio SB Hydrophilic Plus Slides (BSB 7028).
2. Air dry for 2 hours at 58° C.
3. Deparaffinize, dehydrate, and rehydrate tissues.
4. 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).
5. 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.

6. After heat treatment, transfer slides in ImmunoDNA Retriever with Citrate or EDTA to room temperature and let stand for 15-20 minutes.
7. For manual IHC, perform antibody incubation at ambient temperature. For automated IHC methods, perform antibody incubation according to instrument manufacturer's instructions.
8. Wash slides with ImmunoDNA washer or DI water.
9. Continue IHC 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 |

**Mounting Protocols**

For detailed instructions using biodegradable permanent mounting media such as XyGreen PermaMounter (BSB 0169-0174) or organic solvent based resin such as PermaMounter (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.2019.00471
2. 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.2014.2688
3. 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/s10549-013-2811-8
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5. 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.24574
6. U.S. Department of Health and Human Services: Centers for Disease Control and Prevention. Guidelines for Safe WorkPractices 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<br>EMERGO EUROPE<br>Prinsessegracht 20<br>2514 AP The Hague<br>The Netherlands | Storage Temperature<br>Limites de température<br>Zulässiger Temperaturbereich | Manufacturer<br>Fabricant<br>Hersteller | REF<br>Catalog Number<br>Référence du catalogue<br>Bestellnummer |
| IVD<br>In Vitro Diagnostic Medical Device<br>Dispositif médical de diagnostic in vitro<br>In-Vitro-Diagnostikum | Read Instructions for Use<br>Consulter les instructions d'utilisation<br>Gebrauchsanweisung beachten | Expiration Date<br>Utiliser jusque<br>Verwendbar bis | LOT<br>Lot Number<br>Code du lot<br>Chargenbezeichnung |


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