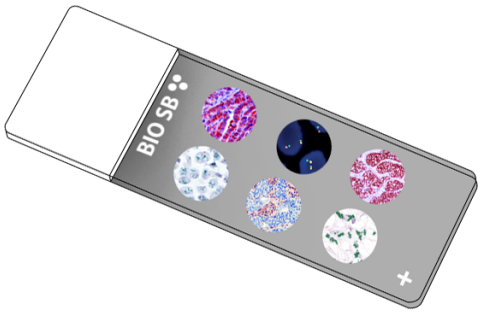
Bio SB
BIOSCIENCE FOR THE WORLD

# IMP-3\1GF2BP3 Control Slides

CE IVD




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

**Summary and Explanation**
Insulin-like growth factor 2 mRNA-binding protein 3 is a protein that in humans is encoded by the IGF2BP3 gene. The protein encoded by this gene is primarily found in the nucleolus, where it can bind to the 5' UTR of the insulin-like growth factor II leader 3 mRNA and may repress translation of insulin-like growth factor II during late development. The encoded protein contains several K Homology domains, which are important in RNA binding and are known to be involved in RNA synthesis and metabolism. IMP3 is normally expressed in early embryonic tissues. The IHC of IMP3 may help in the classification of Non-small Cell Lung Carcinomas and Pancreatic Adenocarcinomas as well as subtypes of carcinomas from other organs such Renal Cell Carcinoma, Adenocarcinoma of the Uterine Cervix, Endometrial Carcinoma, Adenocarcinoma of the Esophagus, Malignant Melanoma, Merkel Cell Carcinoma, Urothelial Carcinoma, Neuroendocrine Carcinoma of the Lung, and triple negative breast cancer.

Various studies have found that IMP3 is a marker for malignancy and is correlated with increased tumor aggressiveness and reduced overall survival. The diagnosis of Pancreatic Ductal Adenocarcinoma in core needle biopsies can be challenging, and immunohistochemical studies of IMP3 expression have been found to be a potential new marker for the diagnosis of Pancreatic Ductal Adenocarcinoma in core needle biopsies. IMP3 expression for the prognostic evaluation of non-small cell lung carcinomas has been found to exhibit mainly cytoplasmic staining pattern in the Non-small-cell lung carcinoma tissues with a positive rate of IMP3 protein expression of 74.7% in the Non-small-cell lung carcinoma tissues, a significantly higher than the rate of 19.9% in the adjacent non-tumor tissues. In the early- and late-stage Non-small-cell lung carcinoma the disease-free and overall survival rates of the patients with IMP3 expression were significantly lower than those of the patients without IMP3 expression. IMP3 plays a significant role in the progression of Non-small-cell lung carcinoma, and that it may potentially be used as an independent biomarker for prognostic evaluation. IMP3 may be a useful diagnostic marker in the assessment of endometrial cancers and their precursor lesions, particularly when the amount of available tissue material is limited and a concern of type II cancer arises. High frequency of IMP3 expression is present in decidualized endometrial stroma of gestational endometrium and chorionic villi in early pregnancy.

**Presentation**
Five slides of IMP-3/1GF2BP3 positive tissues, each mounted on Hydrophilic Plus Slides, provided in a plastic mailer.

| *Catalog No.* | *Quantity* |
|---|---|
| BSB-9242-CS | 5 slides |
| BSB 2970 | 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 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**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3. Wang T, Fan L, Watanabe Y, McNeill PD, Moulton GG, Bangur C, et al. L523S, an RNA-binding protein as a potential therapeutic target for lung cancer. Br J Cancer 2003;88:887-94.
4. Istvanic S, Fanger GR, Fraire AE, Khan A, Li C, Yantiss, RK. Spectrum of KOC (K homology domain containing protein over-expressed in cancer) immunostaining among carcinomas of different sites. Mod Pathol 2005;18:298A-9A.
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7. Jinhui Zhang, et al. Clinical implications of insulin-like growth factor II mRNA-binding protein 3 expression in non-small cell lung carcinoma. Oncol Lett. 2015 Apr; 9(4): 1927–1933.
8. 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<br>Ideon Science Park<br>Scheelevägen 17<br>SE-223 70 Lund, Sweden | Storage Temperature<br>Limites de température<br>Zulässiger Temperaturbereich | Manufacturer<br>Fabricant<br>Hersteller | REF Catalog Number<br>Référence du catalogue<br>Bestellnummer |
| IVD 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 Lot Number<br>Code du lot<br>Chargenbezeichnung |


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