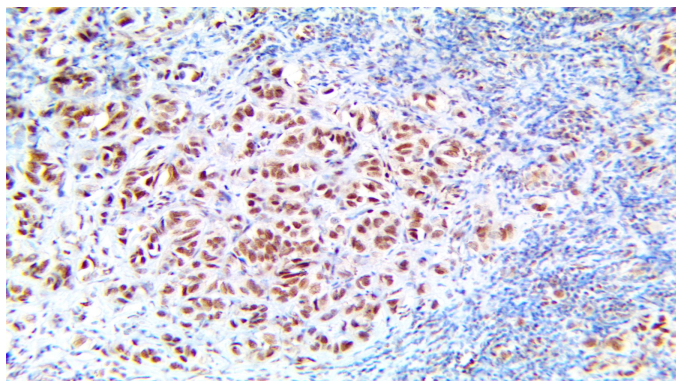


BRG-1/SMARCA4

Clone: BSB-154
Mouse Monoclonal



Inset: IHC of BRG-1/SMARCA4 on a FFPE Ductal Breast Carcinoma 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

Synthetic peptide corresponding to the N-terminus of the human Brg-1 protein.

Summary and Explanation

Brahma-related gene-1 (BRG-1) protein is encoded by the gene *SMARCA4*, which is localized on chromosome 19. BRG-1 is the core catalytic ATPase subunit of the SWI/SNF complex. SWI/SNFs are a member of the family of ATP-dependent chromatin-remodeling complexes and the function of SWI/SNFs is to facilitate the transcriptional activation or repression of target genes. BRG-1 is essential for DNA repair, differentiation, and organ development.

There are several studies that suggest the involvement of BRG-1 in different cancer types. It was found that the loss of BRG-1 expression occurs in a portion of tested cancer types, including Breast, Colon, Head/Neck, Ovarian, Liver and Renal Cell Cancer. On the contrary, overexpression of BRG-1 was found in Breast, Colorectal, and Prostate Cancer, as well as Melanoma and Neuroblastoma. There is no established cutoff for determining high versus low expression; staining of the surrounding normal tissue has been used as a median value relative to which BRG-1/SMARCA4 expression may be considered increased or decreased. An IHC analysis of BRG-1 in Non-Small Cell Lung Cancer (NSCLC) patients revealed that the survival rate of BRG-1 negative patients was 0%, when compared to BRG-1 positive patients, indicating the prognostic value of BRG-1 as a biomarker. Other IHC studies found that the loss of BRG-1 protein expression highly correlates with Small Cell Carcinoma of the Ovary, Hypercalcemic type (SCCOHT), suggesting BRG-1 as a diagnostic marker for SCCOHT.

Antibody Type	Mouse Monoclonal	Clone	BSB-154
Isotype	IgG1	Reactivity	Paraffin, Frozen
Localization	Nuclear	Species Reactivity	Human, Mouse, Rat
Control	Colon, Kidney, Prostate, Testis, Transitional Cell Carcinoma, T Cell Lymphoblastic Lymphoma		
Application	Lung Cancer, Ovarian Cancer, Breast Cancer, Melanoma & Skin Cancer, Colon & Gastrointestinal Cancer, Prostate Cancer		

The BRG-1 antigen is negatively affected by 3% Hydrogen Peroxide (3% H₂O₂) and therefore it is not recommended to be used to quench endogenous peroxidase on specimens to be tested by IHC of BRG-1. We recommend the use of the PolyDetector Peroxidase Blocker (BSB 0050 – BSB 0054) or similar.

Presentation

Anti-BRG-1/SMARCA4 is a Mouse Monoclonal antibody derived from cell culture supernatant that is concentrated, dialyzed, filter sterilized and diluted in buffer pH 7.5, containing BSA and sodium azide as a preservative.

Catalog No.	Presentation	Dilution	Volume
BSB-3714-3	Predilute	Ready-to-Use	3.0 mL
BSB-3714-7	Predilute	Ready-to-Use	7.0 mL
BSB-3714-15	Predilute	Ready-to-Use	15.0 mL
BSB-3714-01	Concentrate	1:25-1:100	0.1 mL
BSB-3714-05	Concentrate	1:25-1:100	0.5 mL
BSB-3714-1	Concentrate	1:25-1:100	1.0 mL

Control Slides Available

Catalog No.	Quantity
BSB-9038-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 (NaN₃) 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.

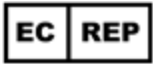







Product Limitations

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

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Symbol Key / Légende des symboles/Erläuterung der Symbole

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