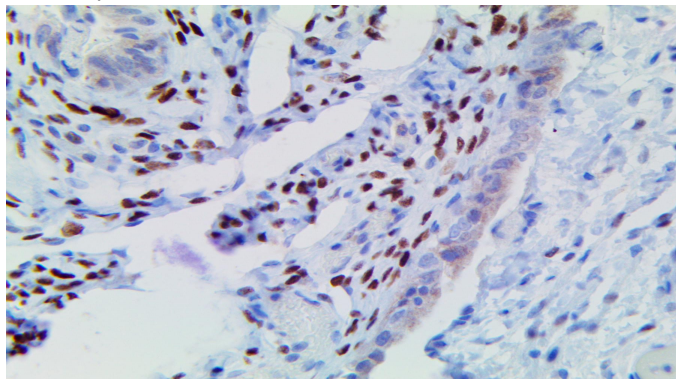


FOXL2

Clone: RPab
Rabbit Polyclonal



Inset: IHC of FOXL2 on a FFPE Fallopian Tube 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 C-terminus residues of the human FOXL2 protein.

Summary and Explanation

The Forkhead box L2 (FOXL2) gene encodes FOXL2, a transcription factor involved in ovarian development and function. Before birth and in adulthood, the FOXL2 protein regulates the growth and proliferation of hormone-producing ovarian granulosa cells. FOXL2 is also involved in the breakdown of fats, steroid hormones, and potentially harmful reactive oxygen species in the ovaries.

FOXL2 is a relatively sensitive and highly specific for Sex Cord-Stromal Tumors (SCST). FOXL2 expression is present in almost all SCSTs with a FOXL2 mutation or without a mutation. A specific somatic mutation in the FOXL2 gene has been found in Adult Granulosa Cell Tumor (402C→G / C134W), which is present in 70-95% of Ovarian Adult Granulosa Cell Tumors but not in Ovarian Fibromas. This mutation is also present in 2 of 5 men with Adult Granulosa Cell Tumor but absent in Ovarian Juvenile Granulosa Cell Tumors. Studies have demonstrated that FOXL2 is expressed in Cervical Squamous Cancer. FOXL2 suppresses the proliferation and promotes apoptosis of Cervical Cancer cells mainly through decreasing Ki-67 expression and increasing Fas ligand expression. FOXL2 has also been found to restrain the invasiveness of Cervical Cancer cells; hence, FOXL2 might be a novel tumor suppressor in Cervical Cancer. A study has demonstrated that FOXL2 is expressed in Breast Cancer and influences clinical outcome with improved recurrence-free survival in cases with nuclear expression. In a multivariate Cox model, nuclear FOXL2 was a significant prognostic factor in ER-positive patients treated with tamoxifen and tumors expressing nuclear FOXL2 were also more likely positive for stromal and/or cytoplasmic aromatase.

Antibody Type	Rabbit Polyclonal	Clone	Polyclonal
Isotype	IgG	Reactivity	Paraffin, Frozen
Localization	Nuclear, Cytoplasmic	Species Reactivity	Human, Mouse, Pig, Bovine
Control	Fallopian Tube, Cervix, Pancreas, Placenta, Extra Marginal Zone Lymphoma		
Application	Ovarian Cancer, Germ Cell Tumors, Cervical Cancer		

Presentation

Anti-FOXL2 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.

<i>Catalog No.</i>	<i>Presentation</i>	<i>Dilution</i>	<i>Volume</i>
BSB-3725-3	Predilute	Ready-to-Use	3.0 mL
BSB-3725-7	Predilute	Ready-to-Use	7.0 mL
BSB-3725-15	Predilute	Ready-to-Use	15.0 mL
BSB-3725-01	Concentrate	1:50-1:200	0.1 mL
BSB-3725-05	Concentrate	1:50-1:200	0.5 mL
BSB-3725-1	Concentrate	1:50-1:200	1.0 mL

Control Slides Available

<i>Catalog No.</i>	<i>Quantity</i>
BSB-9183-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 Digester (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 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. US National Library of Medicine: Genetics. FOXL2 Gene. 18 August 2020. <https://medlineplus.gov/genetics/gene/foxl2/#conditions>
2. Al-Agha OM, Huwatt HF, Chow C, et al. FOXL2 is a sensitive and specific marker for sex cord-stromal tumors of the ovary. *Am J Surg Pathol.* 2011;35(4):484-494. doi:10.1097/PAS.0b013e31820a406c
3. Liu XL, Meng YH, Wang JL, Yang BB, Zhang F, Tang SJ. FOXL2 suppresses proliferation, invasion and promotes apoptosis of cervical cancer cells. *Int J Clin Exp Pathol.* 2014;7(4):1534-1543. Published 2014 Mar 15.
4. Jamieson S, Butzow R, Andersson N, et al. The FOXL2 C134W mutation is characteristic of adult granulosa cell tumors of the ovary. *Mod Pathol.* 2010;23(11):1477-1485. doi:10.1038/modpathol.2010.145
5. McCluggage WG, Singh N, Kommos S, Huntsman DG, Gilks CB. Ovarian cellular fibromas lack FOXL2 mutations: a useful diagnostic adjunct in the distinction from diffuse adult granulosa cell tumor. *Am J Surg Pathol.* 2013;37(9):1450-1455. doi:10.1097/PAS.0b013e31828e4f55
6. Wegman P, Göthlin Eremo A, Lindlöf A, Karlsson M, Stål O, Wingren S. Expression of the forkhead transcription factor FOXL2 correlates with good prognosis in breast cancer patients treated with tamoxifen. *Int J Oncol.* 2011;38(4):1145-1151. doi:10.3892/ijo.2011.923
7. 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

	QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden		Storage Temperature Limites de température Zulässiger Temperaturbereich		Manufacturer Fabricant Hersteller		Catalog Number Référence du catalogue Bestellnummer
	In Vitro Diagnostic Medical Device Dispositif médical de diagnostic in vitro In-Vitro-Diagnostikum		Read Instructions for Use Lisez les instructions d'utilisation Gebrauchsanweisung beachten		Expiration Date Utiliser jusque Verwendbar bis		Lot Number Code du lot Chargenbezeichnung