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Mouse Integrin alpha 2 Ready-To-Use IHC Kit

Cat. No.: IHC0198M
Sample Type: FFPE tissue **Size: 50T**
(including a control slide)
Storage and Stability: Please store components at the temperatures indicated on the individual tube labels. The kit is stable for 6 months from the date of receipt.

General Information

Number	Component	50T	Concentration	Storage
1	PBS Buffer (powder)	2 L×2	20x	RT
2	Antigen Retrieval Buffer	20 ml	100x	2-8℃
3	Endogenous Peroxidase Blocking Buffer	3 ml	RTU	2-8℃
4	Blocking Buffer	3 ml	RTU	2-8℃
5	Primary Antibody (Mouse Integrin alpha 2 Recombinant Rabbit mAb)	6 ml	RTU	2-8℃
6	Secondary Antibody (Goat Anti-Rabbit IgG H&L / HRP)	6 ml	RTU	2-8℃
7	Chromogen Component A	0.3 ml	RTU	-20℃
8	Chromogen Component B	0.3 ml	RTU	-20℃
9	Counter Staining Reagent	5 ml	RTU	RT
10	Differentiation Reagent	6 ml	RTU	RT
11	Mounting Media	5 ml	RTU	RT
12	Control slide (Mouse kidney)	1 slide	RTU	RT
13	Datasheet	1 copy		

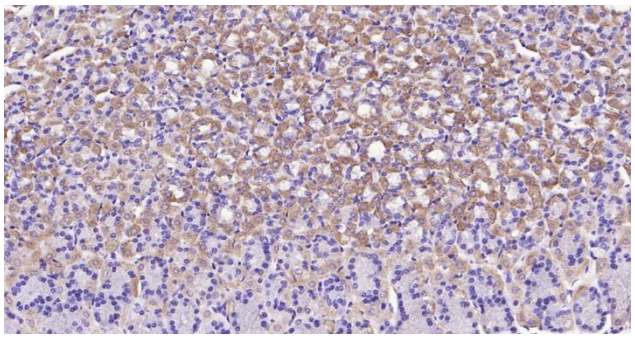
Background

CD49b (Integrin alpha 2, Integrin alpha 2 chain, VLA-2 alpha chain, HM alpha 2) is a member of the integrin family. It is a glycoprotein with molecular weight of 150 kD, and it complexes with CD29 (Integrin beta 1) to form the heterodimeric integrin VLA-2 (integrin alpha 2 beta 1, or GPIa/IIa) complex. VLA-2 is an extracellular receptor for laminin, collagen, and fibronectin, and interaction with its ligands results in the activation of intracellular signaling pathways. It has reported roles in VEGF-induced angiogenesis in vivo, as well as adhesion and lymphocyte activation. CD49b is expressed by NK cells, NK-T cells, monocytes, platelets, and epithelial cells. It is also expressed on adaptive immune cells such as T and B cells, specifically on a subset of CD4+ T cells in the spleen, on intraepithelial and lamina propria lymphocytes in the intestine, as well as on a population of peripheral CD4+ type 1 T regulatory (Tr1) cells that co-express LAG-3.

Synonyms

CD49b; Integrin alpha 2 chain; VLA-2 alpha chain; HM alpha 2; CD49B; DX5; Itga2; BR; GPIa; HPA-5; VLAA2; integrin alpha-2.

Validation Data



Immunohistochemical analysis of paraffin embedded mouse stomach tissue slide using IHC0198M (Mouse Integrin alpha 2 IHC Kit).

Immunohistochemistry Protocol

1. Deparaffinization And Rehydration

Immerse slides in fresh xylene for 15 minutes and then repeat two more times using separate containers. Immerse slides sequentially in 100%, 95%, 90%, 80%, and 70% ethanol solutions for 5 minutes each. Rinse slides 3 times with distilled water for 5 minutes each.

2. Antigen Retrieval

Add 100×**Antigen Retrieval Buffer** into distilled water to prepare a 1×solution. Boil slides in 1×solution at 95°C-100°C for 15 minutes. Move the slides to 1×solution at room temperature (RT) and allow them to stand for 20 minutes. Rinse 3 times with **PBS Buffer** (dissolve the powder in 2L distilled water) for 5 minutes each.

3. Block Endogenous Peroxidase

Drain the liquid off the slides and then use a hydrophobic IHC pen to draw circles on the slides around tissue sections. Add 2-4 drops of **Endogenous Peroxidase Blocking Buffer** directly on slides, covering the whole tissue and block slides for 15 minutes at RT. Rinse 3 times with **PBS Buffer** for 5 minutes each.

4. Serum Blocking

Block with 2-4 drops of **Blocking Buffer** for 20 minutes at RT.

5. Primary Antibody Incubation

Drain blocking buffer from slides. Incubate slides with 2-4 drops of **Mouse Integrin alpha 2 Recombinant Rabbit mAb** overnight at 4°C or 1-2 hours at RT. Rinse 3 times with **PBS Buffer** for 5 minutes each.

6. Secondary Antibody Incubation

Incubate slides with 2-4 drops of **Goat Anti-Rabbit IgG H&L / HRP** for 1-2 hours at RT. Rinse slides 3 times with **PBS Buffer** for 5 minutes each.

7. Signal Development

Remove residual liquid around the tissue section. Add 50ul fresh **DAB Buffer** (**Chromogen Component A : Chromogen Component B : PBS Buffer=1:1:18**) to cover the tissue. Monitor the reaction under the microscope until a brown color is visible (approximate 3-5 minutes at RT). Stop reaction immediately by rinsing with distilled water. Rinse slides 3 times with distilled water for 5 minutes each.

8. **Counterstain**

Counterstain with an appropriate amount of **Counter Staining Reagent** for 3-5 minutes at RT. Rinse slides with distilled water for 5 minutes. Use 2-4 drops of **Differentiation reagent** to cover the tissue for 30 seconds. Rinse slides twice with distilled water for 5 minutes each.

9. Dehydration and Slides Mounting

Immerse slides sequentially in 70%, 80%, 90%, 95%, and 100% ethanol for 5 minutes each at RT. Immerse slides in 2 changes of fresh xylene, 15 minutes each. Drop some **Mounting Media** on the tissue. Mount coverslips.

Notes

1. The positive control slide provided in the kit allows you to be sure that the experimental set-up is working properly.
2. Do not allow slides to dry at any time during this procedure.
3. Please don't replace the matching reagents in this product with other manufacturers' products.
4. As DAB is a carcinogen, please take necessary precautions.

5. PBS (reagent 1) can be stored for one week at 4℃ after preparation; The antigen retrieval buffer (1×reagent 2) and the chromogenic agent (the mixture of reagents 7 and 8) should be prepared right before each assay.

Please cite this product as "IHC0198M, Bioss Antibodies". Citation example: “Mouse tissue sections using Mouse Integrin alpha 2 IHC Kit (IHC0198M, Bioss Antibodies) were stained for Integrin alpha 2 according to the manufacturer's instructions.