ROR gamma T

Format	Catalog No.	Pack size	Dilution
Concentrated	GB3208A,B	0.1, 0.5 mL	1:100
Prediluted	GB3208AA	6.0 mL	Ready to use

PRODUCT DESCRIPTION -

Retinoic acid receptor-related orphan nuclear receptor gamma (RORγt) is regarded as a principal regulator in the differentiation of T helper 17 cells (Th17 cells), which play a crucial role in the pathogenesis of various autoimmune diseases, including multiple sclerosis, rheumatoid arthritis, inflammatory bowel disease, and psoriasis. RORγT was first recognized as a transcription factor essential for thymopoiesis by sustaining the survival of CD4+CD8+ thymocytes. Consequently, RORγt is specifically expressed in the thymus and many immune system tissues, despite the presence of RORγt mRNA in numerous tissues . Regulatory T cells may co-express RORγt and FOXP3, exhibiting both pro-inflammatory and immunosuppressive properties. Research indicates that a subset of CD8+RORγt+ T cells, characterized by low PD-1 and high OX40 expression, correlates with diminished patient survival, hence suggesting that CD8+RORγt+ T cells are proinflammatory. RORγt appears to be a crucial regulator of immunological homeostasis and proinflammatory responses, and may serve as a potential therapeutic target in inflammatory disorders.

INTENDED USE -

Intended for In Vitro Diagnostic Applications
ROR gamma T [6F3.1] is a mouse monoclonal antibody designed for laboratory applications to qualitatively identify ROR gamma T protein immunohistochemistry (IHC) in formalin-fixed paraffin-embedded (FFPE) human tissues. The clinical interpretation of any staining or its absence must be supplemented by morphological studies utilizing appropriate controls and assessed in conjunction with the patient's clinical history and other diagnostic tests by a skilled pathologist.

SUMMARY AND EXPLANATION -

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specifically expressed in the thymus and many immune system tissues, despite the presence of RORγt mRNA in numerous tissues. Regulatory T cells may co-express RORγt and FOXP3, exhibiting both pro-inflammatory and immunosuppressive properties. Research indicates that a subset of CD8+RORγt+ T cells, characterized by low PD-1 and high OX40 expression, correlates with shorter patient survival, suggesting that CD8+RORγt+ T cells are proinflammatory. RORγt appears to be a crucial regulator of immunological homeostasis and proinflammatory responses, and may serve as a potential therapeutic target in inflammatory disorders.

PRINCIPLE OF PROCEDURE -

Antigen detection in tissues and cells is a multi-step immunohistochemistry procedure. The first step attaches the primary antibody to its designated epitope. Following the tagging of the antigen with a primary antibody, a secondary antibody is introduced to attach to the primary antibody. An enzyme label is subsequently introduced to attach to the secondary antibody; the detection of the attached antibody is demonstrated by a colorimetric reaction.

SOURCE - Mouse monoclonal

SPECIES REACTIVITY - Human; others not tested

CLONE - 6F3.1

ISOTYPE - IgG2a/kappa

PROTEIN CONCENTRATION - ~10 mg/ml. Call for lot specific Ig concentration.

EPITOPE/ANTIGEN - GST-tagged recombinant protein corresponding to human ROR gamma T

CELLULAR LOCALISATION - Nuclear

POSITIVE TISSUE CONTROL - Small intestine (Peyer's patch), tonsil, thymus

KNOWN APPLICATIONS- Immunohistochemistry 30-40 min. At RT. Staining of formalin-fixed tissues requires heating tissue sections in between pH 7.4 - 9.0 for 45 min at 95°C followed by cooling at room temperature for 20 minutes.

SUPPLIED AS - Buffer with protein carrier and preservative

STORAGE AND STABILITY -

Store at 2°C to 8°C. Do not use after expiration date printed on vial. If reagents are stored under conditions other than those specified in the package insert, they must be verified by the user. Diluted reagents should be used promptly; any remaining reagent should be stored at 2°C to 8°C

Materials required but not provided -

1) Positivetissuecontrol- Smallintestine(Peyer'spatch),tonsil,thymus
2) Negativecontroltissue(internalorexternal)
3) Microscopeslidesandcoverslips
4) Stainingjarsorbaths
5) Timer
6) Xyleneorxylenesubstitute
7) Ethanolorreagentalcohol
8) Deionizedordistilledwater
9) Heatingequipmentorenzymefortissuepretreatmentstep
10) Detection system
11) Chromogen
12) Wash buffer
13) Hematoxylin
14) Antibody diluents
15) Peroxide block
16) Light microscope
17) Mounting medium

LIMITATIONS-

The optimum antibody dilution and protocols for a specific application can vary. These include, but are not limited to fixation, heat-retrieval method, incubation times, tissue section thickness and detection kit used. Due to the superior sensitivity of these unique reagents, the recommended incubation times and titers listed are not applicable to other detection systems, as results may vary. The data sheet recommendations and protocols are based on exclusive use of Genebio products. Ultimately, it is the responsibility of the investigator to determine optimal conditions.