

Perforin Primary Antibody

Clone: PRF1/2470 (Mouse Monoclonal)

Localization – Cytoplasm

Host Species – Rabbit

Ig Class – IgG2c, kappa

Intended Use

This antibody is designed for the specific localization of Perforin in formalin-fixed, paraffin-embedded (FFPE) tissue sections.

Storage & Handling

Store RTU Vial at 2-8°C. Fresh dilutions for concentrated antibodies, if required, should be prepared prior to use and are stable for up to one day at room temperature (20-26°C).

Working Principle

IHC is a two-step process wherein the primary antibody binds to the antigen of interest and that binding is detected by a chromogen. The primary antibody may be used in IHC using manual techniques or any Automated Staining System. Positive and negative controls should always be run simultaneously with all patient specimens.

Product Description

Perforin is a key cytolytic effector protein localized within the cytoplasmic granules of cytotoxic lymphocytes. It plays a critical role in immune surveillance and host defense by mediating the lysis of virus-infected and neoplastic cells. Perforin is a 555-amino acid protein that includes a 21-amino acid N-terminal signal peptide and has an estimated molecular mass ranging from 70 to 75 kDa. Functionally, perforin operates as a pore-forming protein, facilitating transmembrane channel formation via a mechanism analogous to that of complement component C9, with which it shares significant structural homology. Expression of perforin is restricted to cytotoxic effector cell subsets, such as CD8⁺ T lymphocytes and natural killer (NK) cells, and is absent in CD4⁺ helper T cells and various tumor cell lines. Perforin serves as a crucial mediator of granule exocytosis-induced cytotoxicity, enabling the delivery of pro-apoptotic granzymes into target cells. Genetic mutations in the PRF1 gene encoding perforin are causative of familial hemophagocytic lymphohistiocytosis type 2 (FHL2 or HPLH2), a severe autosomal recessive immunoregulatory disorder manifesting in early childhood. Additionally, alternative splicing of PRF1 results in the generation of multiple transcript variants, potentially contributing to functional diversity.

Material Supplied

Perforin antibody is affinity purified and diluted in PBS, pH 7.4, containing 1% BSA and 0.09% sodium azide.

Material required But Not Supplied

- Xylene
- DI Water
- Control Tissues
- Isopropyl alcohol
- Antigen retrieval buffers
- Hematoxylin
- Positive charged slides
- Blocking Reagents
- Mounting media
- Wash Buffer
- Detection System
- Cover glass

Working Reagent Procedure

- Ready-to-Use antibodies have been optimized for use with the recommended protocols and should not require further dilution.
- Concentrated antibodies must be diluted in accordance with the recommended protocol.

Recommended Protocol

Refer the following table for the details on specific recommended protocol for this antibody.

Control Tissue	Tonsil and Spleen	Antibody Incubation Time	30-60 Minutes at RT
Dilution factor	1:20-50 (Antibody Diluent: DH144)	Retrieval Pre-treatment	Tris-EDTA based HIER (AR9 Buffer: DH020)

Precautions

This product should be used by qualified and trained professional users only.

Avoid microbial contamination of reagents to minimize non-specific staining. Never pipette reagents by mouth. Avoid contact of reagents and specimens with skin. If reagents or specimens come into contact with sensitive area, wash with sufficient amounts of water. Dispose of the unused reagents. This kit contain sodium azide at concentrations of less than 0.1%. Sodium azide is not classified as a hazardous chemical at these concentrations, but proper handling protocols should be observed. For more information on product hazards, precautions and waste disposal, *Material Safety Data Sheets* are available upon request.

Limitations

Improper tissue handling and processing prior to immunostaining can lead to inconsistent results. Variations in embedding and fixation or the nature of the tissue may lead to variations in results. Endogenous peroxidase activity or pseudo peroxidase activity in erythrocytes and tissue biotin may result in non-specific staining based on the detection system employed. Tissues containing Hepatitis B Surface Antigen (HBsAg) may give false positive with horseradish peroxidase systems. Improper counterstaining and mounting may compromise the interpretation of results. Interpretation of the staining result is solely the responsibility of the user. Experimental results should be confirmed by a medically-established diagnostic product or procedure. Evaluation must be performed by a qualified pathologist.

Troubleshooting

For Technical Support contact us at +91 - 7506501122 or info@dygnova.com or your local distributor to report unusual staining.

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	Manufacturer Details		Use by Date		Lot/Batch Number
	Manufacturing Date		Consult Instructions for Use		Catalogue Number
	Temperature Limits		Sufficient for 'n' assays / tests		In-vitro Diagnostic Medical Device