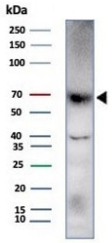
PRF1 Antibody / Perforin [clone rPRF1/8058] (V4101)

Catalog No.	Formulation	Size
V4101-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4101-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4101SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

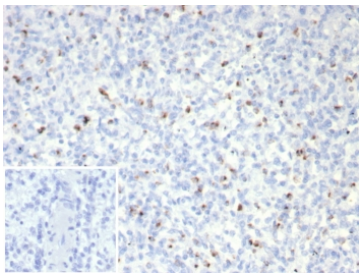
Recombinant MOUSE MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG1, kappa
Clone Name	rPRF1/8058
Purity	Protein A/G affinity
UniProt	P14222
Localization	Cytoplasm
Applications	Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 1-2ug/ml for 30 minutes at RT
Limitations	This PRF1 antibody is available for research use only.



Western blot testing of human HDLM-2 cell lysate with Perforin-1 antibody (clone rPRF1/8058). Predicted molecular weight ~61 kDa.



IHC staining of FFPE human spleen tissue with Perforin-1 antibody (clone rPRF1/8058). Inset: PBS used in place of primary Ab (secondary Ab negative control). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.

Description

PRF1 antibody recognizes Perforin, a calcium-dependent pore-forming cytolytic protein encoded by the PRF1 gene. Perforin is a key effector molecule of cytotoxic T lymphocytes and natural killer cells, where it localizes to cytoplasmic secretory granules and mediates immune cell-directed apoptosis. Upon recognition of infected or transformed target cells, Perforin is released into the immunologic synapse and inserts into the target cell membrane, forming transmembrane pores that enable entry of granzymes and activation of apoptotic signaling pathways.

Perforin belongs to the membrane attack complex/perforin family and contains a conserved MACPF domain that is essential for membrane binding and pore formation. Its activity is tightly regulated and calcium dependent, ensuring targeted cytolytic function without bystander tissue damage. Expression of PRF1 is enriched in activated CD8-positive T cells and NK cells, particularly within lymphoid tissues such as spleen, tonsil, and lymph node. Cytoplasmic granule localization is the expected staining pattern in these immune cell populations.

The PRF1 gene is located on chromosome 10 and plays a central role in antiviral immunity, tumor immunosurveillance, and immune homeostasis. Mutations in PRF1 are associated with familial hemophagocytic lymphohistiocytosis and other immune dysregulation syndromes, highlighting its critical function in controlling excessive immune activation. Altered perforin expression has also been studied in cancer immunology and inflammatory diseases.

This PRF1 antibody (clone rPRF1/8058) is suitable for detecting Perforin expression in research applications. A PRF1 antibody is useful for identifying cytotoxic lymphocyte populations and evaluating immune effector function in normal and pathological tissues.

Application Notes

Optimal dilution of the PRF1 antibody should be determined by the researcher.

Immunogen

A recombinant human Perforin-1 protein fragment (within amino acids 355-555) was used as the immunogen for the PRF1 antibody.

Storage

Aliquot the PRF1 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

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