

PRODUCT INFORMATION

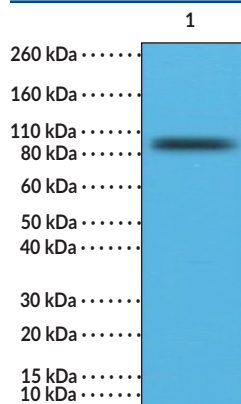
B7-H3/CD276 (C-Term) Rabbit Monoclonal Antibody (Clone RM335)

Item No. 32272

Overview and Properties

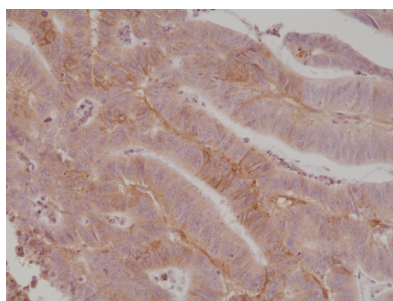
Contents:	This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
Synonyms:	4Ig-B7-H3, B7 Homolog 3, B7RP-2
Immunogen:	Peptide from the C-terminal region of human B7-H3
Cross Reactivity:	(+) B7-H3
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:500-1:1,000 for IHC and 1:5,000-1:10,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Lane 1: LNCaP cell lysate

WB of LNCaP cell lysate using B7-H3/CD276 (C-Term) Rabbit Monoclonal Antibody (Clone RM335) at a dilution of 1:10,000.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human colon cancer tissue using B7-H3/CD276 (C-Term) Rabbit Monoclonal Antibody (Clone RM335) at a 1:1,000 dilution.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

B7-H3, also known as CD276, is a type I transmembrane glycoprotein and member of the B7-CD28 immune checkpoint protein family with roles in the T cell-mediated immune response.^{1,2} It is encoded by *CD276* in humans and is composed of an N-terminal signal peptide, an extracellular domain containing two identical pairs of immunoglobulin (Ig) constant (IgC) and variable (IgV) domains, a transmembrane region, and an intracellular tail. *CD276* is ubiquitously expressed, however, protein expression is post-transcriptionally regulated.² B7-H3 protein is constitutively expressed on non-immune fibroblasts, endothelial cells, and osteoblasts, and can be induced in immune cells such as dendritic cells, macrophages, natural killer (NK) cells, and T cells. It inhibits NK cell-mediated lysis, as well as induces co-inhibition of T cells, increases activation of tumor-specific cytotoxic T cells, and decreases proliferation of CD4⁺ and CD8⁺ T cells through modulation of nuclear factor of activated T cells (NFAT), NF-κB, and AP-1. Serum levels of B7-H3 are increased in patients with sepsis, as are intestinal levels in patients with graft versus host disease. High tumor levels of B7-H3 protein are associated with increased tumor size, poorly differentiated tumors, lymph invasion, and shorter overall survival in patients with lung and breast cancers.³ Cayman's B7-H3/CD276 (C-Term) Rabbit Monoclonal Antibody (Clone RM335) can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

References

1. Li, G., Quan, Y., Che, F., *et al.* B7-H3 in tumors: friend or foe for tumor immunity? *Cancer Chemother. Pharmacol.* **81(2)**, 245-253 (2018).
2. Janakiram, M., Shah, U.A., Liu, W., *et al.* The third group of the B7-CD28 immune checkpoint family: HHLA2, TMIGD2, B7x, and B7-H3. *Immunol. Rev.* **276(1)**, 26-39 (2017).
3. He, L. and Li, Z. B7-H3 and its role in bone cancers. *Pathol. Res. Pract.* **215(6)**, 152420 (2019).

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