

Code No. 29020

**Anti-Human
MDA5 Rabbit IgG Affinity Purify**Volume : 100 μ g

Lot No. : 0A-729

Introduction : A full-length cDNA encoding MDA5 was isolated by screening a melanoma differentiation-subtracted library and a placenta cDNA library, also known as Ifih1(Interferon induced with helicase C domain protein 1). Yoneyama et al. have identified a DExD/H box-containing RNA helicase, retinoic acid inducible gene I (RIG-I), as an essential component of the sensor of intracellular dsRNA (1). Furthermore, two other DexD/H-box-containing RNA helicases, MDA5 and LGP2, were found in the mammalian database (2). MDA5 acts as a positive regulator in the virus-induced activation of type I IFN genes. On the other hand, LGP2 functions as a dominant-negative regulator of RIG-I/MDA5-mediated signaling. These molecules have critical roles for antiviral innate immune responses.

Antigen : Synthetic peptide of part of N terminal of human MDA5 (TIEDRNRIAAENNGN)

Purification : Purified with antigen peptide

Form : Lyophilized product from 1% BSA in PBS containing 0.05% NaN_3

How to use : 1.0 mL deionized water will be added to the product (the conc. comes up 100 μ g/mL)

Stability : Lyophilized product, 5 years at 2 – 8 $^{\circ}\text{C}$

: Solution, 2 years at -20 $^{\circ}\text{C}$

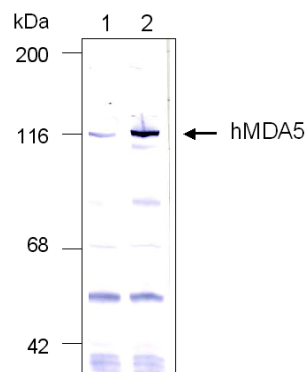
Application : Western blotting in concentration of 1 – 5 μ g/mL

Specificity : Reacts with human and mouse MDA5

Reference : 1. Yoneyama M, Kikuchi M, Natsukawa T, Shinobu N, Imaizumi T, Miyagishi M, Taira K, Akira S, Fujita T. The RNA helicase RIG-I has an essential function in double-stranded RNA-induced innate antiviral responses. *Nat Immunol.* 2004 Jul;5(7):730-7.
2. Yoneyama M, Kikuchi M, Matsumoto K, Imaizumi T, Miyagishi M, Taira K, Foy E, Loo YM, Gale M Jr, Akira S, Yonehara S, Kato A, Fujita T. Shared and unique functions of the DExD/H-box helicases RIG-I, MDA5, and LGP2 in antiviral innate immunity. *J Immunol.* 2005 Sep 1;175(5):2851-8.

Example : lane 1:
HeLa cell lysate without IFN β stimulation
lane 2:
HeLa cell lysate with IFN β stimulation

When this antibody is used in Western Blotting, several bands appear although the antibody specifically detects the MDA5 protein. We recommend to perform positive and negative controls in parallel.



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