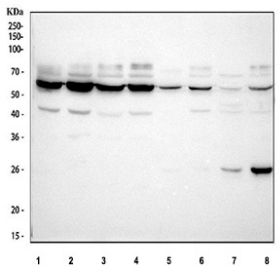
TIM1 Antibody / KIM-1 / HAVCR1 (RQ4572)

Catalog No.	Formulation	Size
RQ4572	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q96D42
Applications	Western blot: 0.5-1ug/ml ELISA (Capture): 1-5ug/ml (human recombinant protein)
Limitations	This TIM1 antibody is available for research use only.



Western blot analysis using TIM1 antibody. Lane 1: human 293T whole cell lysate; Lane 2: human HepG2 whole cell lysate; Lane 3: human A549 whole cell lysate; Lane 4: human Caco-2 whole cell lysate; Lane 5: rat kidney tissue lysate; Lane 6: rat testis tissue lysate; Lane 7: mouse kidney tissue lysate; Lane 8: mouse testis tissue lysate. The predicted molecular weight of TIM-1 is ~39 kDa, while TIM1 antibody detects a dominant band at ~60 kDa on SDS-PAGE, consistent with the mature glycosylated form of this type I transmembrane protein. Additional bands likely reflect alternative glycosylation or processing states.

Description

TIM1 antibody targets T cell immunoglobulin and mucin domain containing protein 1, commonly referred to as KIM-1 and encoded by the HAVCR1 gene. TIM-1 is a type I transmembrane glycoprotein characterized by an extracellular immunoglobulin V-like domain and a mucin-rich region, followed by a single transmembrane segment and a short cytoplasmic tail. The protein is primarily localized to the plasma membrane and intracellular compartments of epithelial and immune cells, where it functions in injury response and immune regulation. Under basal conditions, TIM-1 expression

is low in most tissues but becomes markedly induced in epithelial cells following tissue damage, particularly in the kidney.

Functionally, T cell immunoglobulin and mucin domain containing protein 1 plays a role in cellular responses to injury by acting as a scavenger receptor and modulator of immune signaling. TIM-1 has been shown to bind phosphatidylserine exposed on apoptotic cells, supporting phagocytic clearance and tissue repair processes. In immune cells, TIM-1 can influence activation and cytokine production, linking epithelial stress signals with adaptive immune responses. A TIM1 antibody supports investigations into injury-associated signaling and immune modulation.

Expression of TIM-1 is most prominently associated with proximal tubular epithelial cells in the kidney following injury, reflecting its widespread use as a biomarker for renal damage. Beyond the kidney, inducible expression has been reported in activated T cells and other epithelial tissues under inflammatory or stress-related conditions. This regulated expression pattern underscores a role for TIM-1 in sensing tissue damage and coordinating immune and repair responses rather than maintaining constitutive tissue function.

From a disease-relevance perspective, KIM-1 has been extensively studied in acute kidney injury, chronic kidney disease, and toxicological models of renal damage. Elevated HAVCR1 expression correlates with tubular injury severity and disease progression. TIM-1 has also been explored in inflammatory disorders, transplantation biology, and cancer research, where its roles in immune regulation and epithelial cell behavior may contribute to disease mechanisms. These associations make TIM-1 a valuable target for studies of injury-driven pathology and immune responses.

At the molecular level, the mucin-rich extracellular region of TIM-1 is subject to extensive glycosylation, which can influence receptor stability, ligand interactions, and apparent migration on SDS-PAGE without altering the underlying amino acid sequence. Regulation of TIM-1 function is further influenced by receptor trafficking and cellular context. TIM1 antibody reagents support research applications focused on kidney injury biology, epithelial stress responses, and immune regulatory pathways, with NSJ Bioreagents providing reagents intended for research use.

Application Notes

Optimal dilution of the TIM1 antibody should be determined by the researcher.

Immunogen

Amino acids Q58-K289 from the human protein were used as the immunogen for the TIM1 antibody.

Storage

After reconstitution, the TIM1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

References (2)

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