

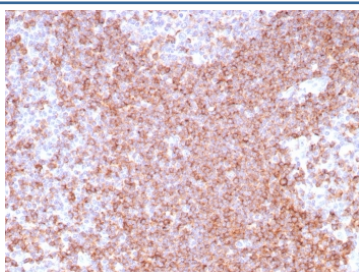
## CD39 Antibody [clone CD39/8538R] (V4118)

Catalog No.	Formulation	Size
V4118-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4118-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4118SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

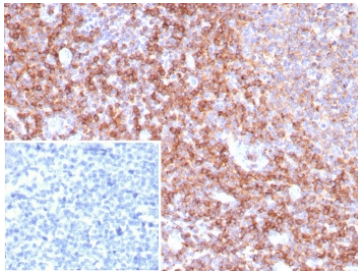
Recombinant **RABBIT MONOCLONAL**

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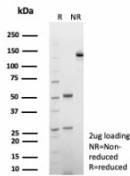
<b>Availability</b>	1-3 business days
<b>Species Reactivity</b>	Human
<b>Format</b>	Purified
<b>Clonality</b>	Recombinant Rabbit Monoclonal
<b>Isotype</b>	Rabbit IgG, kappa
<b>Clone Name</b>	CD39/8538R
<b>Purity</b>	Protein A/G affinity
<b>UniProt</b>	P49961
<b>Localization</b>	Cell surface
<b>Applications</b>	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 minutes at RT
<b>Limitations</b>	This CD39 antibody is available for research use only.



IHC staining of FFPE human tonsil tissue with CD39 antibody (clone CD39/8538R).  
 HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



IHC staining of FFPE human tonsil tissue with CD39 antibody (clone CD39/8538R). 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.



SDS-PAGE analysis of purified, BSA-free CD39 antibody (clone CD39/8538R) as confirmation of integrity and purity.

## Description

CD39 antibody is a valuable reagent for exploring purinergic signaling and extracellular nucleotide metabolism. CD39, encoded by the ENTPD1 gene, is a plasma membrane-bound ectoenzyme that catalyzes the sequential hydrolysis of ATP and ADP into AMP. This reaction is a critical checkpoint in extracellular signaling, as ATP serves as a danger-associated molecular pattern while adenosine promotes tissue protection and immune suppression.

In the context of purinergic signaling, CD39 shapes the extracellular nucleotide pool, directly influencing P2 and P1 receptor activation. By lowering ATP concentrations, CD39 prevents overstimulation of P2 receptors, which can drive inflammation, pain, and tissue injury. At the same time, CD39-generated AMP becomes a substrate for CD73, leading to adenosine production and activation of P1 receptors that suppress immune activity and promote repair.

This regulatory role extends across many biological systems. In the nervous system, CD39 helps limit excitotoxicity and neuroinflammation. In the liver and kidney, it regulates responses to ischemia-reperfusion stress. In the immune system, CD39 expression on regulatory T cells maintains tolerance and prevents autoimmunity. Collectively, these activities place CD39 at the intersection of danger signaling and tissue protection.

On the molecular level, CD39 is part of the NTPDase family of enzymes and is characterized by its apyrase conserved regions, which mediate nucleotide hydrolysis. Its enzymatic activity requires magnesium or calcium ions and occurs in a stepwise fashion, with both triphosphate and diphosphate nucleotides as substrates. These biochemical properties allow CD39 to act as a versatile regulator of extracellular signaling events.

The CD39 antibody is widely applied in immunohistochemistry, immunofluorescence, western blotting, and flow cytometry to measure protein expression across tissues and cell types. These applications are essential for studies of purinergic signaling, extracellular nucleotide metabolism, and immune suppression. For scientists studying neurobiology, immunology, or cardiovascular health, the CD39 antibody provides a powerful tool. NSJ Bioreagents supplies validated antibodies that ensure reproducibility and precision in advanced molecular research.

## Application Notes

Optimal dilution of the CD39 antibody should be determined by the researcher.

## Immunogen

Recombinant full-length human CD39 protein was used as the immunogen for the CD39 antibody.

## Storage

Aliquot the CD39 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.