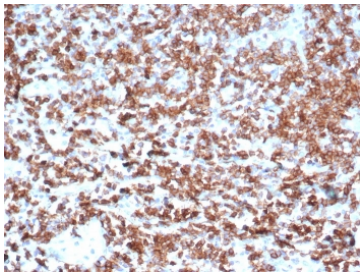
CD39 Antibody for IHC [clone CD39/6860] (V4115)

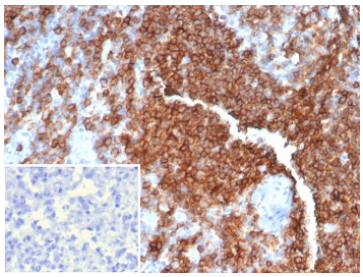
Catalog No.	Formulation	Size
V4115-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4115-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4115SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	CD39/6860
Purity	Protein A/G affinity
UniProt	P49961
Localization	Cell surface
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 minutes at RT
Limitations	This CD39 antibody is available for research use only.



IHC analysis of CD39 Antibody in FFPE human tonsil tissue. The antibody for IHC (clone CD39/6860) demonstrates membranous HRP-DAB brown staining in lymphocytes within germinal centers and interfollicular regions, consistent with ENTPD1 / CD39 expression. Heat-induced epitope retrieval was performed in 10mM Tris with 1mM EDTA, pH 9.0, at 95oC for 20 minutes followed by cooling before testing.



IHC analysis of CD39 Antibody in FFPE human lymph node tissue. The antibody for IHC (clone CD39/6860) demonstrates strong membranous HRP-DAB brown staining in lymphocytes within cortical and paracortical regions, consistent with ENTPD1 / CD39 expression, while surrounding stromal elements are largely negative. The inset shows PBS used in place of the primary antibody as a secondary-only negative control. Heat-induced epitope retrieval was performed in 10mM Tris with 1mM EDTA, pH 9.0, at 95oC for 20 minutes followed by cooling before testing.

Description

CD39 antibody is a reliable tool for studying immune suppression, inflammation, and tumor immunology. The encoded protein, also known as ectonucleoside triphosphate diphosphohydrolase 1, is an ectoenzyme that regulates extracellular nucleotide metabolism. By hydrolyzing ATP and ADP into AMP, CD39 limits inflammatory danger signals and generates substrates for adenosine production. This dual activity positions CD39 as a master regulator of purinergic signaling in the immune system.

CD39 is broadly expressed on endothelial cells, regulatory T cells, B cells, dendritic cells, and some myeloid subsets. On T regulatory cells, CD39 combines with CD73 to generate adenosine, which dampens effector T cell responses and promotes tolerance. In the tumor microenvironment, CD39 contributes to an immunosuppressive niche, helping cancer cells evade immune attack. High expression is therefore associated with poor prognosis in many cancers, including colorectal, breast, and lung carcinoma.

In addition to its role in cancer, CD39 is relevant in autoimmune and inflammatory conditions. Reduced CD39 activity correlates with hyperactive immunity in diseases such as multiple sclerosis and inflammatory bowel disease. Conversely, overexpression of CD39 has been implicated in chronic infections, where immune responses are suppressed. These findings highlight the importance of CD39 in balancing protective immunity with tolerance.

At the molecular level, CD39 belongs to the ecto-ATP diphosphohydrolase family and contains conserved apyrase motifs essential for catalytic activity. Its enzymatic function depends on divalent cations such as magnesium or calcium. By controlling the levels of extracellular ATP, a potent proinflammatory molecule, CD39 prevents excessive immune activation while enabling adenosine generation. This mechanism makes it a key checkpoint in immune regulation.

The CD39 antibody for IHC is widely applied in immunohistochemistry, allowing scientists to evaluate cell type-specific expression, monitor changes in immune states, and assess therapeutic interventions targeting the adenosine pathway. For researchers focused on immuno-oncology, autoimmunity, or transplantation, the CD39 antibody provides a dependable detection tool. NSJ Bioreagents supplies validated antibodies designed for reproducibility and accuracy in advanced 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.