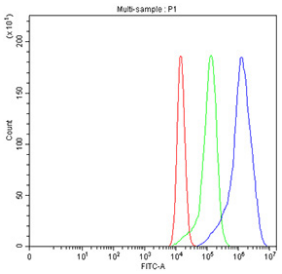
CD47 Antibody / IAP (R32830)

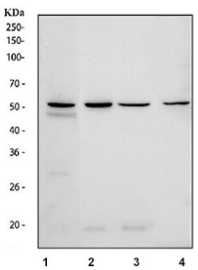
Catalog No.	Formulation	Size
R32830	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

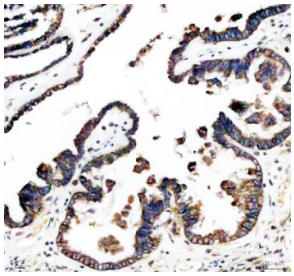
Availability	1-3 business days
Species Reactivity	Human, Mouse
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q08722
Applications	Western Blot : 0.5-1ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml Flow Cytometry : 1-3ug/million cells
Limitations	This CD47 antibody is available for research use only.



Flow cytometry testing of fixed human A549 cells with CD47 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= CD47 antibody.



Western blot testing of 1) human HeLa, 2) human HT1080, 3) human A549 and 4) mouse thymus tissue lysate with CD47 antibody at 0.5ug/ml. Predicted molecular weight: 35~60 kDa depending on glycosylation level.



IHC staining of FFPE human ovarian tissue with CD47 antibody, HRP-secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.

Description

CD47 antibody is a well-established reagent for investigating immune regulation, cell adhesion, and cancer biology. The encoded protein, CD47, also known as integrin-associated protein (IAP), is a ubiquitously expressed membrane glycoprotein that plays critical roles in cell communication and survival. CD47 functions as a ligand for signal regulatory protein alpha (SIRPa), delivering the 'don't eat me' signal that prevents phagocytosis by macrophages. This immune checkpoint role has made CD47 a major focus of therapeutic research in oncology and immunology.

In addition to regulating phagocytosis, CD47 interacts with integrins and thrombospondin-1, influencing cell migration, adhesion, and angiogenesis. These interactions contribute to tissue remodeling, vascular biology, and responses to stress. Through its diverse binding partners, CD47 acts as a multifunctional signaling receptor that coordinates cellular responses to environmental cues.

Research has highlighted CD47 as a key player in cancer progression. Many tumor types, including leukemia, breast, ovarian, and colon cancers, overexpress CD47 to evade immune clearance. Blocking the CD47-SIRPa pathway restores macrophage-mediated phagocytosis of cancer cells, making CD47 a promising therapeutic target. Preclinical studies and clinical trials are actively evaluating anti-CD47 antibodies as immunotherapeutics. Beyond oncology, CD47 is also studied in cardiovascular disease, ischemia-reperfusion injury, and autoimmunity, where modulation of its signaling pathways may provide therapeutic benefit.

At the molecular level, CD47 is a five-transmembrane protein that associates with heterotrimeric G proteins and integrins to propagate intracellular signals. It influences cytoskeletal dynamics, calcium signaling, and apoptosis, integrating both extracellular and intracellular pathways. Its broad expression and multifaceted functions underscore its importance across diverse biological systems.

The CD47 antibody is widely applied in western blotting, immunohistochemistry, immunofluorescence, and flow cytometry to assess protein expression, localization, and regulation. These techniques are critical for studies of immune evasion, integrin signaling, and vascular biology. For investigators in cancer research, immunotherapy development, or cell signaling, the CD47 antibody provides a reliable detection tool. NSJ Bioreagents offers validated antibodies that ensure reproducibility and accuracy for advanced scientific research.

Application Notes

Optimal dilution of the CD47 antibody should be determined by the researcher.

Immunogen

Amino acids KSTVPTDFSSAKIEVSQLLKGDASLKMDKSDAVSHT were used as the immunogen for the CD47 antibody.

Storage

After reconstitution, the CD47 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.