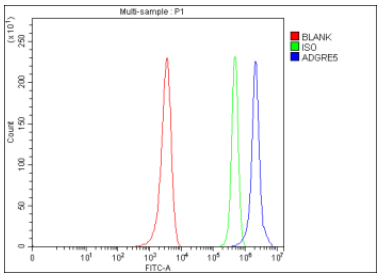
ADGRE5 Antibody / Adhesion G protein-coupled receptor E5 / CD97 (FY12716)

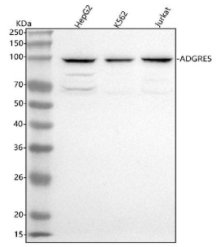
Catalog No.	Formulation	Size
FY12716	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	P48960
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This ADGRE5 antibody is available for research use only.



ADGRE5 Antibody FACS. Flow Cytometry analysis of U251 cells using anti-ADGRE5 antibody. Overlay histogram showing U251 cells stained with (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-ADGRE5 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



ADGRE5 Antibody WB. Western blot analysis of ADGRE5 using anti-ADGRE5 antibody. Lane 1: human HepG2 whole cell lysates, Lane 2: human K562 whole cell lysates, Lane 3: human Jurkat whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-ADGRE5 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. A predominant band is observed near ~100 kDa, consistent with the glycosylated, autoproteolytically processed form of CD97. Minor lower-migrating species may represent less glycosylated or precursor forms of the receptor.

Description

ADGRE5 antibody detects Adhesion G protein-coupled receptor E5 (also known as CD97), a member of the E class of adhesion GPCRs that mediate cell-cell and cell-matrix interactions. Encoded by the ADGRE5 gene on chromosome 19p13.12, this receptor is composed of an extended extracellular region with multiple EGF-like repeats, a GPCR autoproteolysis-inducing (GAIN) domain, and a seven-transmembrane region typical of GPCRs. CD97 is expressed on leukocytes, smooth muscle cells, and epithelial cells, where it regulates adhesion, migration, and immune cell activation. The receptor interacts with multiple ligands, including CD55 (decay-accelerating factor), integrins, and chondroitin sulfate, which modulate immune responses and tissue remodeling.

ADGRE5 undergoes autoproteolytic cleavage within the GAIN domain, producing a large extracellular alpha subunit and a smaller membrane-bound beta subunit that remain noncovalently associated. This processing is essential for receptor maturation and ligand binding. The EGF-like domains mediate interaction with CD55, linking ADGRE5 function to complement regulation and immune evasion. In immune cells, ADGRE5 participates in leukocyte migration to inflammatory sites, co-stimulation of T cells, and macrophage activation. It also contributes to angiogenesis, smooth muscle contraction, and cell-cell adhesion in epithelial tissues. Dysregulated expression of CD97 has been associated with inflammatory disorders and several cancers, where it promotes invasion, epithelial-mesenchymal transition, and metastasis.

The ADGRE5 antibody is widely used in immunology, cancer biology, and vascular research to detect receptor expression and distribution. Western blot analysis identifies multiple bands (75-120 kilodaltons) corresponding to the various glycosylated receptor forms, while flow cytometry and immunohistochemistry reveal strong membrane localization. In tumors, overexpression of ADGRE5 enhances motility through interactions with integrins and activation of RhoA and MAPK pathways. Elevated expression correlates with poor prognosis in colorectal, thyroid, and gastric cancers. Conversely, in leukocytes, ADGRE5 expression is dynamically regulated during activation and differentiation, serving as a marker for immune cell subsets.

Beyond cancer and inflammation, ADGRE5 participates in vascular remodeling and smooth muscle physiology. It mediates heterotypic interactions between leukocytes and endothelial cells, facilitating transmigration across the vessel wall. Experimental deletion of ADGRE5 in mice reduces inflammatory cell recruitment and limits tissue damage, underscoring its role in immune regulation. The ADGRE5 antibody enables detailed characterization of receptor expression and function across tissues and disease contexts. NSJ Bioreagents provides this antibody validated for its applications, ensuring specificity for both membrane-bound and cleaved receptor forms in human and model systems.

Researchers studying leukocyte adhesion, inflammatory signaling, and adhesion GPCR biology may also benefit from this CD97 Antibody / Adhesion GPCR Immune Marker page featuring knockout-validated endogenous tissue western blot data for ADGRE5 detection.

Application Notes

Optimal dilution of the ADGRE5 antibody should be determined by the researcher.

Immunogen

E.coli-derived human ADGRE5 recombinant protein (Position: R287-Q690) was used as the immunogen for the ADGRE5 antibody.

Storage

After reconstitution, the ADGRE5 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.