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InnoCyto Inc.

15375 Barranca Pkwy, Suite I-103
Irvine, CA 92618
Email: info@innocyto.com
Phone: 1-949-418-7543

PE/iF594 Anti-Human CD10 Antibody

Catalog Number:	116607, 116608
Size:	25 tests, 100 tests
Target Name:	CD10, CALLA, Neprilysin
Regulatory Status:	RUO

PRODUCT DETAILS

Clone:	HI10a
Application:	Flow Cytometry
Reactivity:	Human
Format:	PE/iF594
Isotype:	Mouse IgG1
Antibody Type:	Monoclonal
Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA
Protein Concentration:	Supplied at a lot-specific concentration.
Storage&Handling:	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Recommended Usage:	For flow cytometric staining, it is recommended to use 5 uL of this reagent per 0.5-1.0 million cells in a 100 µL volume. Optimal reagent performance should be determined by titration for each specific application. PE/iF594 has an excitation max at 565 nm and an emission max at 603 nm.
Excitation Laser:	Blue Laser (488 nm) Green/Yellow laser (532/561nm)
Price (Converted):	1695
Isotype Control:	301431

BACKGROUND INFORMATION

Human CD10, also known as neprilysin or neutral endopeptidase (NEP), is a zinc-dependent membrane-bound metalloprotease expressed on a variety of cell types, including lymphoid progenitors, epithelial cells, and certain stromal cells. It functions primarily as an ectoenzyme that cleaves and inactivates a wide range of bioactive peptides, such as enkephalins, substance P, bradykinin, and atrial natriuretic peptide, thereby regulating local signaling in tissues.

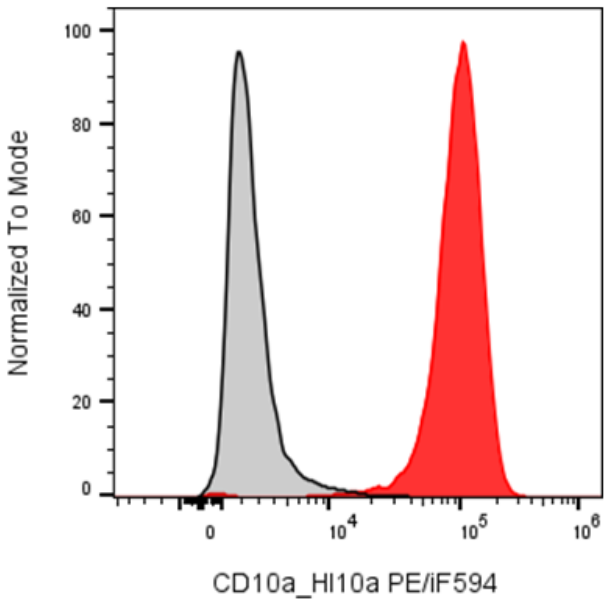
Structurally, CD10 is a type II transmembrane glycoprotein with a short cytoplasmic N-terminus, a single transmembrane domain, and a large extracellular catalytic domain containing the zinc-binding active site. Its enzymatic activity depends on this extracellular domain, which accommodates diverse peptide substrates rather than classical receptor-ligand interactions.

In disease, CD10 is widely used as a diagnostic marker, particularly in hematologic malignancies such as acute lymphoblastic

leukemia (CALLA antigen) and certain lymphomas. It is also implicated in solid tumors, where its expression can correlate with tumor progression or prognosis. Additionally, CD10/neprilysin plays a role in neurodegenerative disorders by degrading amyloid-β peptides, linking it to Alzheimer's disease.

Therapeutically, CD10 is both a biomarker and a drug target. Neprilysin inhibitors (e.g., in cardiovascular disease) enhance natriuretic peptide activity, while modulation of CD10 activity is being explored in cancer and neurodegeneration for its regulatory effects on peptide signaling.

PRODUCT DATA



Human granulocytes were stained with PE/i F594 Anti-Human CD10 clone HI10a (color-filled histogram) or an isotype control (gray histogram).

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