Data Sheet (Cat.No.TMAY-01237F)

TargetMol

Anti-P4HB Antibody-FITC (7J75)

Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human
Conjugation:	FITC
Clone:	7J75
Purification:	Protein A

Applications

Verified Activity:	Human P4HB (PDI) expression in HeLa cells. The cells were treated according to manufacturer's manual (BD Pharmingen™ Cat. No. 554714), and stained with FITC-conjugated Rabbit anti-P4HB (PDI). The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of intact cells.
Application:	FCM
Recommended	10 µl/Test, 0.1 mg/ml

Properties

Stability & Storage:	Store at 2°C-8°C for 12 months, do not freeze. Keep away from direct sunlight. Sodium azide is toxic to cells and should be disposed of properly. Flush with large volumes of water during disposal.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen:	Recombinant Protein: Human P4HB protein (TMPY-01012)
Antigen Species:	Human
Synonyms:	ERp59;prolyl 4-hydroxylase, β polypeptide;Thbp;PDI;Pdia1;prolyl 4-hydroxylase, beta polypeptide

Research Background

Protein disulfide-isomerase, also known as Cellular thyroid hormone-binding protein, Prolyl 4-hydroxylase subunit beta, p55 and P4HB, is a peripheral membrane protein that belongs to the protein disulfide isomerase family. P4HB is highly abundant. In some cell types, it seems to be also secreted or associated with the plasma membrane, where it undergoes constant shedding and replacement from intracellular sources. P4HB localizes near CD4-enriched regions on lymphoid cell surfaces. It is identified by mass spectrometry in melanosome fractions from stage I to stage IV. P4HB reduces and may activate fusogenic properties of HIV-1 gp12 surface protein, thereby enabling HIV-1 entry into the cell. P4HB catalyzes the formation, breakage and rearrangement of disulfide bonds. At the cell surface, it seems to act as a reductase that cleaves disulfide bonds of proteins attached to the cell. P4HB may therefore cause structural modifications of exofacial proteins. Inside the cell, it seems to form/rearrange disulfide bonds of nascent proteins. At high concentrations, P4HB functions as a chaperone that inhibits aggregation of misfolded proteins. At low concentrations, it facilitates aggregation (anti-chaperone activity). P4HB may be involved with other chaperones in the structural modification of the TG precursor in hormone biogenesis. It also acts as a structural subunit of various enzymes such as prolyl 4-hydroxylase and microsomal triacylglycerol transfer protein MTTP.

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