

TCbLR/CD320 Protein, Rat (HEK293, Fc)

Cat. No.:	HY-P76226
Synonyms:	CD320 antigen; 8D6 antigen; FDC-signaling molecule 8D6; FDC-SM-8D6; Transcobalamin receptor
Species:	Rat
Source:	HEK293
Accession:	Q5HZW5/NP_001014223.1 (A29-A210)
Gene ID:	362851
Molecular Weight:	Approximately 65-70 kDa due to the glycosylation.

PROPERTIES

AA Sequence	<p>A P A P T S A P A H T L V Q V S G P R A G S C P T D T F K C L T S G Y C V P L S</p> <p>W R C D G D R D C S D G S D E E E C R I E P C A Q N R Q C Q P Q P A L P C S C D</p> <p>N I S G C S A G S D K N L N C S R S P C Q E G E L R C I L D D V C I P H T W R C</p> <p>D G H P D C P D S S D E L S C D T D T E T D K I F Q E E N A T T S M S S M I V E</p> <p>K E T S F R N V T V A S A G H P S R N P N A</p>
Biological Activity	Measured by its binding ability in a functional ELISA. When Recombinant Rat CD320 is immobilized at 10 µg/mL (100 µL/well) can bind Biotinylated Recombinant mouse TCN2. The ED ₅₀ for this effect is 0.1918 µg/mL.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	TCbLR/CD320 Protein, as the receptor for transcobalamin saturated with cobalamin (TCbl), assumes a crucial role in cobalamin uptake, demonstrating its significance in cellular physiology. Positioned on the plasma membrane, this receptor is notably expressed on follicular dendritic cells (FDC), facilitating interaction with germinal center B cells and contributing to the intricate network of immune responses. Functioning as a costimulator, TCbLR promotes B cell responses to antigenic
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stimuli, thereby fostering B cell differentiation and proliferation. Specifically, it plays a vital role in the differentiation of germinal center-B (GC-B) cells into memory B-cells and plasma cells (PC) through collaborative interactions with T-cells and FDC. Notably, CD320 enhances the proliferation of PC precursors generated by IL-10, showcasing its multifaceted involvement in immune modulation. The interaction of TCb1R with TCN2 further highlights its role in cobalamin homeostasis and cellular processes.

Caution: Product has not been fully validated for medical applications. For research use only.

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