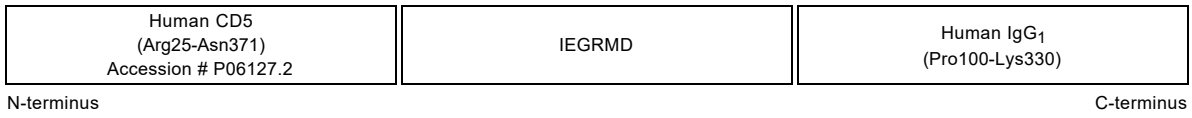
Recombinant Human CD5 Fc Chimera

Catalog Number: 11389-CD

DESCRIPTION

Source

Human embryonic kidney cell, HEK293-derived human CD5 protein



N-terminal Sequence Analysis	Arg25
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	65 kDa

SPECIFICATIONS

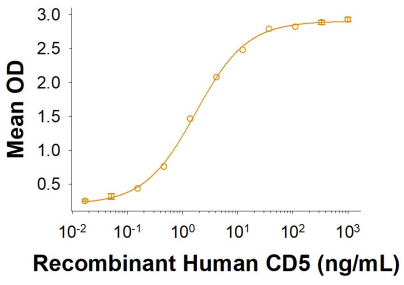
SDS-PAGE	72-83 kDa, under reducing conditions.
Activity	Measured by its binding ability in a functional ELISA. Recombinant Human CD5 Fc Chimera (Catalog # 11389-CD) binds to Human CD5 Antibody (Catalog # MAB16361) with a ED_{50} of 0.800-8.00 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

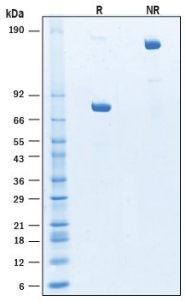
DATA

Binding Activity



Recombinant Human CD5 Fc Chimera Protein Binding Activity. Measured by its binding ability in a functional ELISA. Recombinant Human CD5 Fc Chimera Protein (Catalog # 11389-CD) binds to Human CD5 Antibody (Catalog # MAB16361) with a ED_{50} of 0.800-8.00 ng/mL.

SDS-PAGE



Recombinant Human CD5 Fc Chimera Protein SDS-PAGE. 2 µg/lane of Recombinant Human CD5 Fc Chimera Protein (Catalog # 11389-CD) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 72-83 kDa and 140-170 kDa, respectively.

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Recombinant Human CD5 Fc Chimera

Catalog Number: 11389-CD

BACKGROUND

CD5, also known as Leu-1, Ly-1, and T1, is a 67 kDa transmembrane glycoprotein in the scavenger receptor superfamily (1). Mature human CD5 consists of a 348 amino acid (aa) extracellular domain (ECD) with three scavenger receptor cysteine-rich (SRCR) domains, a 30 aa transmembrane segment, and a 93 aa cytoplasmic domain (2). Within the ECD, human CD5 shares 55% aa sequence identity with mouse and rat CD5. The 52 kDa ECD can be cleaved from the cell surface and circulates in the serum (3). CD5 has been shown to interact homophilically, with CD72 on B cells, and with beta-glucan components of fungal cell walls (4-6). CD5 expression on developing thymocytes is positively regulated by signaling through the T cell antigen receptor (TCR) and is up-regulated on tolerized peripheral $CD4^+$ cells (7, 8). It inhibits TCR signaling and promotes T cell nonresponsiveness and survival (8-10). CD5 signaling inhibits the generation of regulatory T cells but promotes the development of Th17 cells (11, 12). Within the B cell lineage, CD5 is expressed on B-1a cells, anergic B cells, and IL-10 producing regulatory B cells (13-16). Similarly to on T cells, it negatively regulates signaling through the B cell antigen receptor and supports peripheral B cell survival, anergy, and tolerance (13, 14, 16). B cells can produce an intracellularly-retained form of CD5 which lacks the signal peptide and a portion of the first SRCR domain (17). CD5 is also involved in the cellular entry of hepatitis C virus into T cells (18).

References:

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