

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived human CDCP1 protein		
	Human CDCP1 (Phe30-Glu343) Accession # Q9H5V8-3	IEGRMD	Human IgG ₁ (Pro100-Lys330)
	N-terminus		C-terminus
N-terminal Sequence Analysis	Phe30		
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	62 kDa		

SPECIFICATIONS

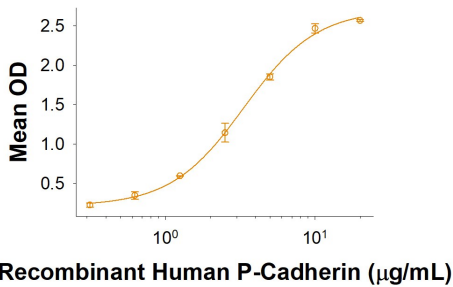
SDS-PAGE	75-95 kDa, under reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human CDCP1 Fc Chimera (Catalog # 10328-CU) is immobilized at 2 µg/mL (100 µL/well), Recombinant Human P-Cadherin Fc Chimera (Catalog # 861-PC) binds with an ED ₅₀ of 0.75-6 µg/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. 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	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 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.

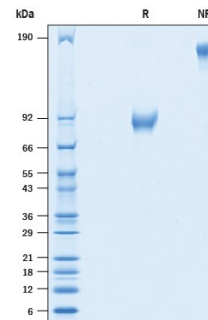
DATA

Binding Activity



When Recombinant Human CDCP1 Fc Chimera (Catalog # 10328-CU) is immobilized at 2 µg/mL (100 µL/well), Recombinant Human P-Cadherin Fc Chimera (Catalog # 861-PC) binds with an ED₅₀ of 0.75-6 µg/mL.

SDS-PAGE



2 µg/lane of Recombinant Human CDCP1 (Secreted Form) Fc Chimera (Catalog # 10328-CU) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 75-95 kDa and 150-190 kDa, respectively.

BACKGROUND

CDCP1 (CUB-domain containing protein 1), also known as Trask or CD318, is a type I transmembrane receptor whose specific role remains unclear. Human CDCP1 is synthesized with a large extracellular domain (ECD) containing three CUB domains, a transmembrane domain and a cytoplasmic domain with 5 tyrosine phosphorylation sites (1). Full-length CDCP1 is ~135 kDa and can be cleaved into a ~70 kDa membrane-bound and a ~65 kDa circulating form (2). A secreted only form of human CDCP1, also called Isoform 2, can also be expressed consisting of amino acids (aa) 30-343 of the ECD (3). Mature human Isoform 2 shares 86% and 85% aa sequence identity to mouse and rat CDCP1 Isoform 2, respectively. CDCP1 was originally identified from proteins involved in metastasis and has been found on tumor, stem cells, keratinocytes and colonic epithelial cells (1). Tyrosine phosphorylation of the intracellular domain of CDCP1 results in downstream signaling through Src-family kinases (SFKs), Akt, and PKC δ (2, 4, 5). CDCP1 appears to be important for cell-cell and cell-substratum adhesion and the phosphorylation state of CDCP1 regulates this effect (5, 7). CDCP1 is associated with a poor prognosis in epithelial tumors, such as lung, pancreatic, colorectal, renal, and ovarian carcinomas (rEf) and is a novel marker of the most aggressive human triple-negative breast cancers (7, 8). Several different extracellular forms of CDCP1 have been shown to exhibit disease-specific expression in prostate cancer (9).

References:

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