Recombinant Human CD44 Fc Chimera

Catalog Number: 11622-CD

DESCRIPTION

Source

Chinese Hamster Ovary cell line, CHO-derived human CD44 protein

Human CD44 (Gln21-Trp650) Accession # P16070.3	GGIEGRMD	Human IgG_1 (Pro100-Lys330)

N-terminus C-terminus

N-terminal Sequence Analysis	Gln21
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	96 kDa

SPECIFICATIONS

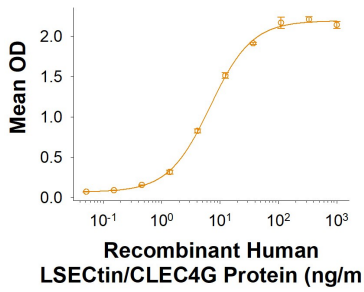
SDS-PAGE	> 190 kDa, under non-reducing conditions.
Activity	Measured by its binding ability in a functional ELISA. Recombinant Human CD44 Fc Chimera (Catalog # 11622-CD) binds to Recombinant Human LSECtin/CLEC4G Protein (Catalog # 2947-CL) with a ED_{50} of 5.00-50.0 ng/mL.
Endotoxin Level	<0.10 EU per 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 250 µg/mL in water.
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.

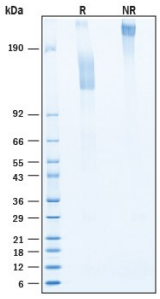
DATA

Binding Activity



Recombinant Human CD44 Fc Chimera Protein Binding Activity. Measured by its binding ability in a functional ELISA. Recombinant Human CD44 Fc Chimera Protein (Catalog # 11622-CD) binds to Recombinant Human LSECtin/CLEC4G Protein (Catalog # 2947-CL) with a ED_{50} of 5.00-50.0 ng/mL.

SDS-PAGE



Recombinant Human CD44 Fc Chimera Protein SDS-PAGE. 2 µg/lane of Recombinant Human CD44 Fc Chimera Protein (Catalog # 11622-CD) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at > 190 kDa.

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Recombinant Human CD44 Fc Chimera

Catalog Number: 11622-CD

BACKGROUND

CD44 is a ubiquitously expressed protein that is the major receptor for hyaluronan and exerts control over cell growth and migration (1-3). Human CD44 has a 20 amino acid (aa) signal sequence, an extracellular domain (ECD) with a 100 aa hyaluronan-binding disulfide-stabilized link region and a 325-530 aa stem region, a 21 aa transmembrane domain, and a 72 aa cytoplasmic domain. CD44 transcripts undergo complex alternative splicing, and, within the stem, ten variably spliced exons (v1-10 corresponding to exons 6-15; although human CD44 lacks v1/exon 6) produce multiple protein isoforms (1-4). The standard or hematopoietic form, CD44H, does not include the variable segments (1-4). Cancer aggressiveness and T cell activation have been correlated with expression of specific isoforms (1, 4, 5). With variable N- and O-glycosylation and splicing within the stalk, CD44 can range from 80 to 200 kDa (1). Within the N-terminal invariant portion of the ECD (aa 21-222), human CD44 shares 76%, 76%, 86%, 83% and 79% identity with corresponding mouse, rat, equine, canine and bovine CD44, respectively. The many reported functions of CD44 fall within three categories (1). First, CD44 binds hyaluronan and other ligands within the extracellular matrix and can function as a "platform" for growth factors and metalloproteinases. Second, CD44 can function as a co-receptor that modifies activity of receptors including MET and the ERBB family of tyrosine kinases. Third, the CD44 intracellular domain links the plasma membrane to the actin cytoskeleton via the ERM proteins, ezrin, radixin and moesin. CD44 can be synthesized in a soluble form (6) or may be cleaved at multiple sites by either membrane-type matrix metalloproteinases, or ADAM proteases to produce soluble ectodomains (7-8). The cellular portion may then undergo gamma secretase-dependent intramembrane cleavage to form an A beta-like transmembrane portion and a cytoplasmic signaling portion that affects gene expression (9-10). These cleavage events are thought to promote metastasis by enhancing tumor cell motility and growth (1, 8).

References:

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