Biotinylated Recombinant Human gp130 Fc Chimera Avi-tag

Catalog Number: AVI10929

DESCRIPTION

Source

Chinese Hamster Ovary cell line, CHO-derived human gp130 protein

Human gp130 (Glu23-Ile618) Accession # AAA59155.1	IEGRMD	Human IgG1 (Pro100-Lys330)	Avi-tag

N-terminus C-terminus

N-terminal Sequence Analysis	Glu23
Structure / Form	Biotinylated via Avi-tag
Predicted Molecular Mass	96 kDa

SPECIFICATIONS

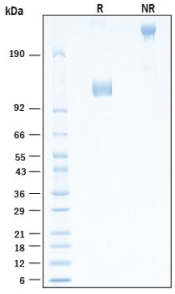
SDS-PAGE	115-127 kDa, under reducing conditions.
Activity	Measured by its binding ability in a functional ELISA. When Biotinylated Recombinant Human gp130 Fc Chimera Avi-tag is captured on a Streptavidin Coated Plate (Catalog # CP004), it binds to Recombinant Human IL-6 (Catalog # 7270-IL) in the presence of Recombinant Human IL-6R alpha (Catalog # 227-SR). The ED_{50} for this binding is 1-10 ng/mL.
Endotoxin Level	<1.0 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

SDS-PAGE



Biotinylated Recombinant Human gp130 Fc Chimera Avi-tag Protein SDS-PAGE. 2 µg/lane of Biotinylated Recombinant Human gp130 Fc Chimera Avi-tag Protein (Catalog # AVI10929) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 115-127 kDa and 230-250 kDa, respectively.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

Biotinylated Recombinant Human gp130 Fc Chimera Avi-tag

Catalog Number: AVI10929

BACKGROUND

gp130 (glycoprotein 130, also known as IL-6RB and IL-6ST) is a subunit of receptor complexes for several cytokines that mediate highly diverse biological processes. These include functionally and structurally related cytokines within the IL-6 and IL-12 family including IL-6, IL-11, IL-27, IL-35, IL-39, leukemia inhibitory factor (LIF), oncostatin M (OSM), ciliary neurotrophic factor (CNTF), cardiotrophin-1 (CT-1), novel neutrophin-1/B cell stimulating factor-3 or cardiotrophin-like cytokine (CLC) and neuropoetin (NP) (1, 2). gp130 is ubiquitously expressed in all cell types. Depending on the cytokine, binding of ligand leads to the formation of signalling complexes that trigger a sophisticated signalling machinery downstream of gp130. Binding of IL-6 (IL-11) to either the membrane-anchored or soluble IL-6 R (IL-11 R) initiates the association of IL-6 R (IL-11 R) with gp130 which then undergoes homo-dimerization and signal transduction. With other IL-6 family cytokines, such as LIF and OSM, signal transduction is triggered by the hetero-dimerization of gp130 and LIF R or OSM R (3-6). Mature human CP130 consists of a 597 amino acid (aa) extracellular region (ECD), a 22 aa transmembrane domain, and a 277 aa cytoplasmic region. Within the ECD, human gp130 shares 73% and 75% aa sequence identity with mouse and rat gp130, respectively. Soluble gp130, which apparently arises either from proteolytic cleavage of the membrane-bound receptor or from alternative splicing, has been detected in human serum. At the present time, the *in vivo* functions of soluble gp130 are not clearly understood. In *in vitro* experiments, natural or recombinant soluble gp130 has been shown to have inhibitory effects on OSM and CNTF activities. Our Avi-tag Biotinylated Recombinant Human gp130 features biotinylation at a single site contained within the Avi-tag, a unique 15 amino acid peptide. Protein orientation will be uniform when bound to streptavidin-coated surface due to the precise control of biotinylation and the rest of the protein is unchanged so there is no interference in the protein's bioactivity.

References:

1. Xu, S. and N. Neamati (2013) Expert Opin. Ther. Targets **17**:1303.
2. Ritter, K. *et al.* (2020) Cells **9**:2695.
3. Martinez-Perez, C, *et al.* (2021) J. Pers. Med. **11**:618.
4. Silver, J.S. and C.A. Hunter (2010) J. Leukoc. Biol. **88**:1145.
5. Narazaki, M. *et al.* (1993) Blood **82**:1120.
6. Taga, T. and T. Kishimoto (1997) Annu. Rev. Immunol. **15**:797.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 **Canada** TEL 855 668 8722 **China** TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449