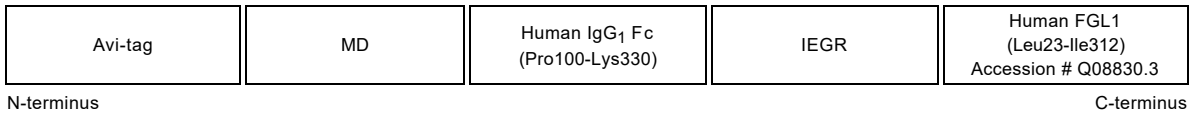
Biotinylated Recombinant Human Hepassocin/FGL1 Avi-tag Fc Chimera

Catalog Number: AVI10573

DESCRIPTION

Source

Chinese Hamster Ovary cell line, CHO-derived human Hepassocin/FGL1 protein



N-terminal Sequence Analysis	Gly of Avi-tag
Structure / Form	Disulfide-linked homodimer Biotinylated via Avi-tag
Predicted Molecular Mass	63 kDa

SPECIFICATIONS

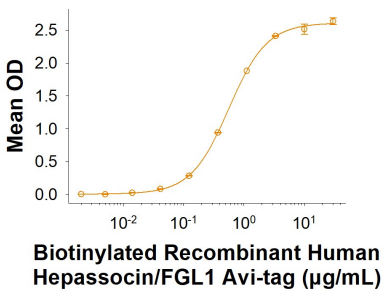
SDS-PAGE	59-68 kDa, under reducing conditions.
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human LAG-3 Fc Chimera Protein (Catalog # 2319-L3) is immobilized at 2.50 µg/mL (100 µL/ well), Biotinylated Recombinant Human Hepassocin/FGL1 Avi-tag Fc Chimera (Catalog # AVI10573) binds with an ED_{50} of 0.250-2.50 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>90%, 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.

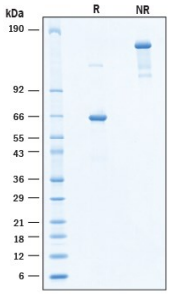
DATA

Binding Activity



Biotinylated Recombinant Human Hepassocin/FGL1 Avi-tag Fc Chimera Protein Binding Activity. Measured by its binding ability in a functional ELISA. When Recombinant Human LAG-3 Fc Chimera Protein (Catalog # 2319-L3) is immobilized at 2.50 µg/mL (100 µL/ well), Biotinylated Recombinant Human Hepassocin/FGL1 Avi-tag Fc Chimera (Catalog # AVI10573) binds with an ED_{50} of 0.250-2.50 µg/mL.

SDS-PAGE



Biotinylated Recombinant Human Hepassocin/FGL1 Avi-tag Fc Chimera Protein SDS-PAGE. 2 µg/lane of Biotinylated Recombinant Human Hepassocin/FGL1 Avi-tag Fc Chimera Protein (Catalog # AVI10573) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 59-68 kDa and 120-140 kDa, respectively.

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BACKGROUND

Hepassocin, also known as Hepatocyte-derived fibrinogen-related protein 1 (HFREP-1) and Fibrinogen-Like Protein 1 (FGL1) (1), is a liver-specific secreted protein belonging to the fibrinogen superfamily whose members share a fibrinogen domain at their C-termini (2). Human Hepassocin/FGL1 is a secreted homodimer consisting of 312 amino acids (aa) with a 22 aa signal sequence and a 290 aa mature protein (3). Mouse and rat Hepassocin/FGL1 share approximately 84% and 83% amino acid identity with human Hepassocin/FGL1, respectively. Human Hepassocin/FGL1 binds LAG-3 through its fibrinogen-like domain independently of MHC class II (4). Hepassocin/FGL1 inhibits antigen-specific T cell activation, with its elevated presence in plasma of cancer patients indicating poor prognoses (4). Other than this role in cancer progression, Hepassocin/FGL1 also has restorative function for liver cells. It is upregulated during liver regeneration following partial hepatectomy (5), and stimulates proliferation of hepatocytes in vivo and improves prognoses with fulminant hepatic failure in rats (6). Its expression is regulated in Hep G2 cells by interleukin-6 (IL-6) and is found in the serum in both bound and unbound states as an acute phase reactant (7). Our Avi-tag Biotinylated human Hepassocin/FGL1 Fc Chimera 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:

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4. Wang, J. *et al.* (2019) Cell. **176**:334.
5. Yu, HT. *et al.* (2009) J. Biol. Chem. **284**:13335.
6. Li, C.Y. *et al.* (2010) Gut. **59**:817.
7. Liu, Z. and C. Ukomadu. (2008) Biochem. Briophys. Res. Commun. **365**:729.

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