Bioactive, Recombinant Human GHR Protein Dimer, His-Avi Tag
Product Code: CSP-24088-03
For Research Use Only (RUO)

Protein Name
GHR

Alternate Name(s)
GH binding protein, GHBP, GHIP

Protein Construct
GHR dimer protein contains a GHR extracellular domain (UniProt# P10912) fused with a proprietary dimer motif followed by a tandem His-Avi tag at the C-terminus. Expressed in HEK293T cell line.

SDS-Page Molecular Weight
76 kDa. The migration range of the heterodimer protein with glycosylation under non-reducing condition is between 120 and 190 on SDS PAGE.

Shipping Conditions
Frozen Dry Ice

Expression Host
HEK293T

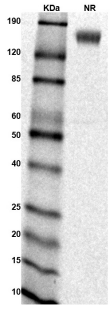
Purity
Greater than 90% dimer form as determined by SDS-PAGE under non-reducing condition

Amino Acid Range
AA: F19-Y264

Formulation
0.22μm filtered PBS, pH 7.4

Stability & Storage
-80^{0}C

SDS-PAGE



MW: Molecular Weight marker reduced condition
NR: GHR dimer under non-reduced condition

The migration range of the heterodimer protein with glycosylation under non-reducing condition is between 120 and 190 on SDS PAGE.

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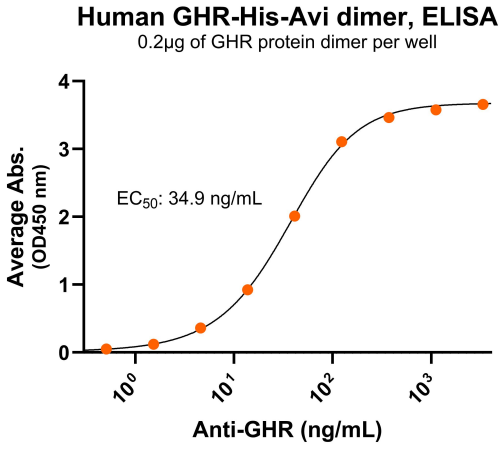
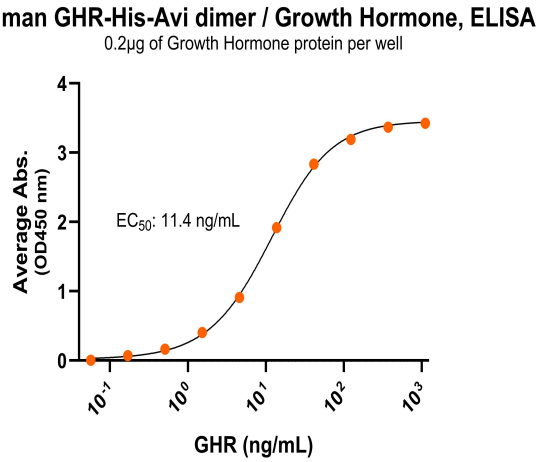
Bioactivity – Antibody Binding



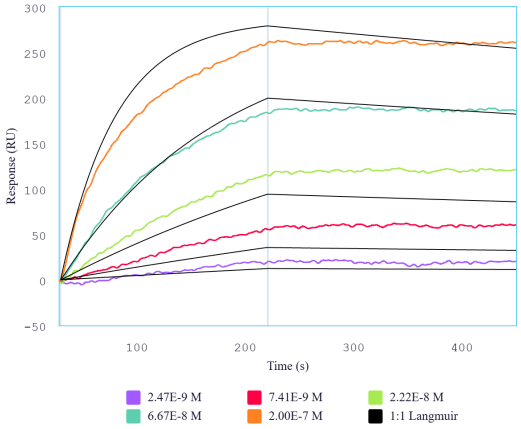
Immobilized human GHR protein dimer, His Tag (CSP-24088-03) at 2 μg/mL (100 μL/well) can bind anti-human GHR monoclonal antibody with half maximal effective concentration (EC50) range of 17.4-69.8 ng/mL (QC tested).

Bioactivity – Ligand Binding



Immobilized human Growth Hormone at 2 μg/mL (100 μL/well) can bind human GHR protein dimer, His Tag (CSP-24088-03) with half maximal effective concentration (EC50) range of 5.7-22.8 ng/mL (QC tested).

Bioactivity – BLI



Immobilized human Growth Hormone can bind human GHR protein dimer, His Tag (CSP-24088-03) with a KD of 0.9-3.6 nM as determined by SPR.

Background

Human growth hormone receptor (GHR) is the transmembrane protein receptor for growth hormone and a member of the Type I cytokine receptor family of receptors. GHR is also known as GH binding protein (GHBP) and GHIP. GHR contains an extracellular domain with two fibronectin type III β domains followed by a single-pass transmembrane domain and a cytoplasmic intracellular domain. GHR can form dimers as preformed dimer and growth hormone induced dimer. GHR dimerization is crucial for growth hormone signaling to activate an intracellular enzyme Janus kinase 2 (JAK2). GHR is widely distributed in the body, and the preformed GHR homodimer is expressed across a wide range of cellular types in different tissues. Mutations in the GHR gene have been associated with growth hormone insensitivity syndrome (GHIS) and growth hormone plays a significant role in cancer development. A recombinant protein mimicking the GHR dimer conformation can be crucial for therapeutic innovation.