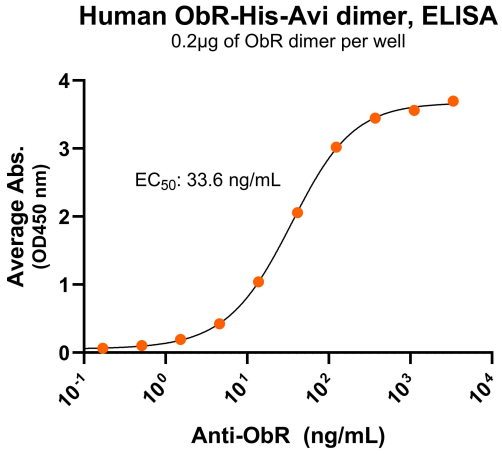
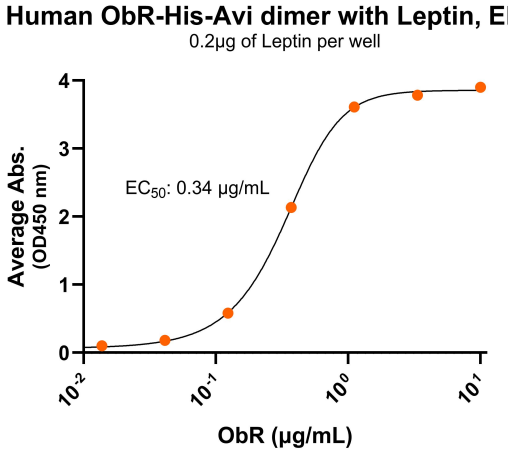
Bioactive, Recombinant Human ObR Protein Dimer, His-Avi-Tag
Product Code: CSP-24090
For Research Use Only (RUO)

Bioactivity – Antibody Binding



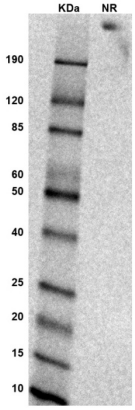
Immobilized human ObR-His-Avi dimer protein (CSP-24090) at 2 μg/mL (100 μL/well) can bind anti-human ObR monoclonal antibody with half maximal effective concentration (EC50) range of 16.8-67.2 ng/mL (QC tested).

Bioactivity – Ligand Binding



Immobilized human Leptin at 2 μg/mL (100 μL/well) can bind human ObR-His-Avi dimer protein (CSP-24090) with half maximal effective concentration (EC50) range of 0.2-0.7 μg/mL (QC tested).

SDS-PAGE



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

The migration range of the dimer protein with glycosylation under non-reducing conditions is >190 KDa on SDS PAGE.

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Expression Host
HEK293T

Protein Name
ObR

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

Alternate Name(s)
OB-R, leptin receptor, LEPR, LEP-R, LEPRD, cluster of differentiation 295, CD295

Protein Construct
ObR dimer protein contains an ObR extracellular domain (UniProt# P48357) fused with a proprietary cis-dimer motif followed by a tandem His-Avi tag at the C-terminus. Expressed in HEK293T cell line.

Amino Acid Range
F22-D839

SDS-Page Molecular Weight
207 kDa. The migration range of the dimer protein with glycosylation under non-reducing conditions is >190 KDa on SDS PAGE.

Formulation
0.22µm filtered PBS, pH 7.4

Shipping Conditions
Frozen Dry Ice

Stability & Storage
-80^{0}C

Background

Human obesity receptor (ObR) is a Type 1 transmembrane receptor belonging to the cytokine receptor family. ObR is the receptor of leptin, a hormone secreted by fat cells that plays a crucial role in regulating appetite, metabolism, and energy homeostasis. ObR is also known as OB-R, leptin receptor (LEPR), LEPRD, and cluster of differentiation 295 (CD295). ObR contains an extracellular domain with an N-terminal cytokine receptor homology domain (CRH-1); an immunoglobulin-like (Ig-like) domain; a second CRH domain (CRH-2), also referred to as the leptin-binding domain (LBD); and two fibronectin type III (FNIII) domains followed by a transmembrane domain and cytoplasmic domain. ObR functions as a dimer to mediate leptin signaling. ObR binds leptin and its activity regulates adipose-tissue mass making ObR an attractive target when it comes to combating obesity.