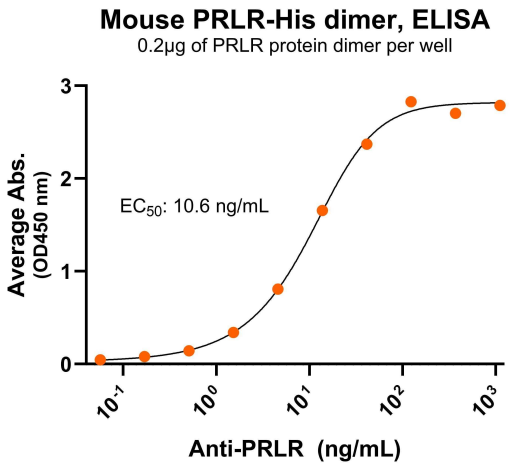
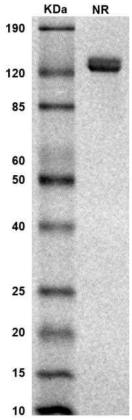
Bioactivity – Antibody Binding



Immobilized mouse PRLR protein dimer, His-tag (CSP-25160-01) at 2 μg/mL (100 μL/well) can bind anti-mouse PRLR monoclonal antibody with half maximal effective concentration (EC50) range of 5.3-21.2 ng/mL (QC tested).

SDS-PAGE



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

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

Recombinant Mouse PRLR Protein Dimer, His- Tag
Product Code: CSP-25160-01
For Research Use Only (RUO)

Expression Host
HEK293T

Protein Name
PRLR

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

Alternate Name(s)
prolactin R, PRL-R

Protein Construct
Mouse PRLR protein dimer contains a PRLR extracellular domain (UniProt# Q08501) fused with a proprietary cis-dimer motif followed by a His tag at the C-terminus. Expressed in HEK293T cell line.

Amino Acid Range
Q20-D229

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

Formulation
0.22μm filtered PBS, pH 7.4

Shipping Conditions
Frozen Dry Ice

Stability & Storage
-80^{0}C

Background

Prolactin receptor (PRLR), also known as PRL-R, is a class 1 cytokine receptor glycoprotein that binds prolactin (PRL). PRLR contains an extracellular domain with a cytokine homology module formed by two fibronectin type III domains, D1 and D2, followed by a transmembrane domain and cytoplasmic domain. PRLR is expressed on cells in mammary glands, pituitary gland, and other tissues. PRLR exists as a monomer and can form dimers. PRLR dimerization is a critical mechanism in PRL signaling, influencing numerous physiological and pathological processes. PRLR pathological dimerization, including constitutive or ligand-independent PRLR dimers sustain abnormal signaling, contributes to cancer, hyperprolactinemia, and immune dysfunction. Dysregulation of PRLR can promote tumor activity and positively regulate the proliferation of malignant cells in breast cancer. PRLR is an attractive therapeutic target for PRLR related diseases including breast cancer, hyperprolactinemia, and metabolic disorders. While structurally and functionally similar to human PRLR, mouse PRLR is a species-specific tool essential for preclinical studies, basic research, and translational research in cancer immunotherapy.