Bioactive, Recombinant Rhesus macaque PVR Protein Dimer, His Tag
Product Code: CSP-25297-01
For Research Use Only (RUO)

Protein Name
PVR

Alternate Name(s)
PVR, HVED, NECL5, Necl-5, PVS, FLJ25946, and TAGE4

Protein Construct
PVR protein dimer contains a PVR extracellular domain (Uniprot# Q0MSE6) fused with a proprietary cis-dimer motif followed by a His tag at the C-terminus. Expressed in HEK293T cell line.

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

Shipping Conditions
Frozen Dry Ice

Expression Host
HEK293T

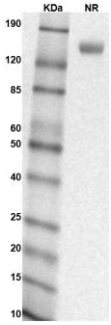
Purity
Greater than 90% dimer form as determined by SDS-PAGE under non-reducing condition

Amino Acid Range
W21-N343

Formulation
0.22µm filtered PBS, pH 7.4

Stability & Storage
-80^{0}C

SDS-PAGE



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

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

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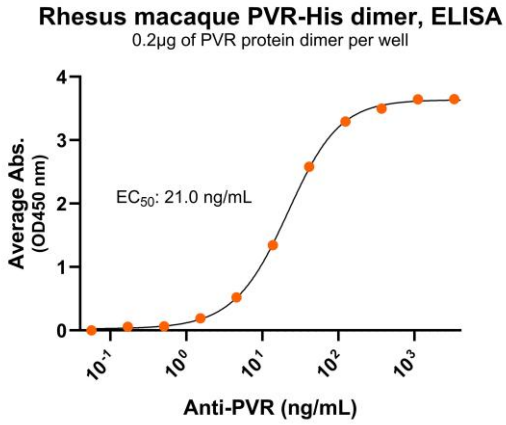
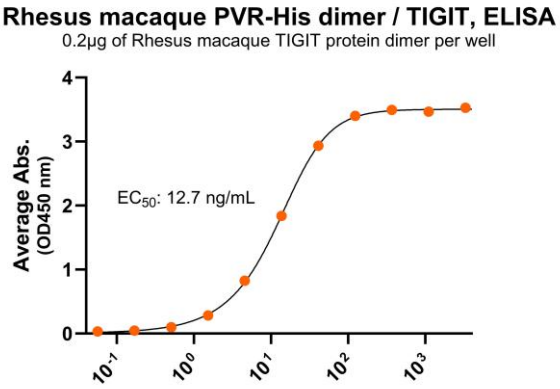
Bioactivity – Antibody Binding



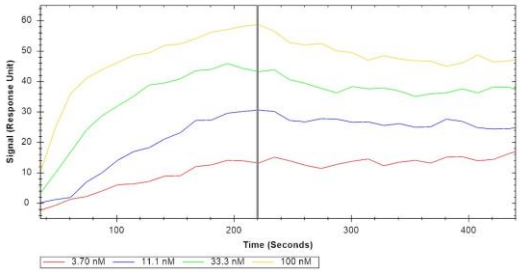
Immobilized Rhesus macaque PVR protein dimer, His Tag (CSP-25297-01) at 2 μg/mL (100 μL/well) can bind anti-non-human primate PVR monoclonal antibody with half maximal effective concentration (EC50) range of 10.5-42 ng/mL (QC tested).

Bioactivity – Ligand Binding



Immobilized Rhesus macaque TIGIT at 2 μg/mL (100 μL/well) can bind Rhesus macaque PVR protein dimer, His Tag (CSP-25297-01) with half maximal effective concentration (EC50) range of 10.5-42 ng/mL (QC tested).

Bioactivity – SPR



Immobilized Rhesus macaque TIGIT protein dimer, His tag (Cat. No. CSP-25298-01) can bind Rhesus macaque PVR protein dimer, His tag (Cat. No. CSP-25297-01) with a KD of 0.5-1.9 nM as determined by LSPR (Nicoya Alto).

Background

Poliovirus Receptor (PVR) is a Type 1 transmembrane glycoprotein that belongs to the Nectin/Nectin-like family. PVR is also known as cluster of differentiation 155 (CD155), HVED, NECL5, Necl-5, PVS, TAGE4, and FLJ25946. PVR protein consists of 3 extracellular immunoglobulin-like (Ig-like) domains (D1-D3), one transmembrane region, and a C-terminal cytoplasmic domain. PVR is widely expressed on various cell types and often overexpressed on cancer cells. Upregulation of PVR in several types of human cancers is associated with a poor prognosis. Although PVR itself is not an immune checkpoint, it's a ligand for checkpoint receptors like TIGIT (T-cell immunoreceptor with Ig and ITIM domains), CD226 (DNAM-1), and CD96. The interactions between PVR and its receptors on immune cells modulate immune responses, such as T cells and natural killer (NK) cells. This makes PVR a critical player in immune regulation and a promising target in checkpoint cancer therapies. While structurally and functionally similar to human PVR homodimer, Rhesus macaque PVR homodimer is a species-specific tool essential for preclinical studies, basic research, and translational research.