Product Name: Human ROR1 Protein Dimer, His Tag

Product Code: CSP-25287

FOR RESEARCH USE ONLY (RUO)

Protein Name: ROR1

Alternate Name(s): neurotrophic tyrosine kinase, receptor-related 1, NTRKR1, dJ537F10.1, receptor tyrosine kinase like orphan receptor 1

Expression Host
HEK293T

Amino Acid Range
Q30-Y406

Protein Construct
ROR1 dimer protein contains the ROR1 extracellular domain (UniProt# Q01973) 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
101 kDa. The migration range of the dimer protein with glycosylation under non-reduced condition is 120-190 kDa on SDS PAGE.

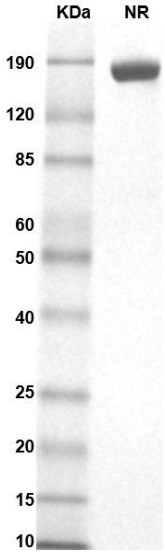
Purity
Greater than 90% dimer form as determined by SDS-PAGE under non-reducing condition

Formulation
0.22µm filtered PBS, pH 7.4

Stability & Storage
-80^{0}C

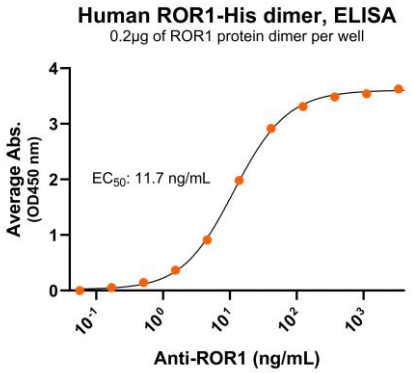
Shipping Conditions
Frozen Dry Ice

SDS-PAGE



MW: Molecular Weight marker reduced condition
NR: ROR1 dimer under non-reduced condition
The migration range of the dimer protein with glycosylation under non-reduced condition is 120-190 kDa on SDS PAGE.

Antibody Binding



Immobilized human ROR1 protein dimer, His tag (Cat. No. CSP-25287) at 2 μg/mL can bind anti-human ROR1 polyclonal antibody with half maximal effective concentration (EC50) range of 5.9-23.4 ng/mL (QC tested).

Background

Receptor tyrosine kinase-like orphan receptor 1 (ROR1) is a tyrosine-protein kinase transmembrane receptor, also known as neurotrophic tyrosine kinase receptor-related 1 (NTRKR1). ROR1 is a Type 1 transmembrane protein part of the ROR family of cell surface receptors. ROR1 contains an extracellular domain with an immunoglobulin-like (Ig-like) domain at the amino-terminus followed by a Frizzled domain (FZD) and Kringle domain (KRD). Like other receptor tyrosine kinases (RTKs), ROR1 can also form dimers on the cell surface. The cysteine-rich FZD mediates the interaction of ROR1 with its ligand, Wnt5a. Generally, ROR1 is only highly expressed and detectable in embryonic tissue during early embryonic development where it modulates neurite growth in the central nervous system and its expression decreases significantly in adult tissues. However, ROR1 is overexpressed on the surface of cancer cells in several types of cancers, including B-cell chronic lymphocytic leukemia (B-CLL), ovarian cancer, breast cancer, and some lung and pancreatic cancers. This explicit expression pattern makes it an excellent cancer marker and an emerging target in cancer therapy.