Data Sheet (Cat.No.TMPY-02028)

TargetMol

RON/CD136 Protein, Human, Recombinant (His)

General Information

Synonyms:	CD136;macrophage stimulating 1 receptor;CDw136;PTK8;RON
Protein Construction:	A DNA sequence encoding the amino acid sequence (Met 1-Leu 571) of human CD136 (Q04912) extracellular domain was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Glu 25 & Gly 310
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q04912
Molecular Weight:	60 kDa (predicted); 70 kDa and 37 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 98 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

The tyrosine kinase receptor, macrophage-stimulating 1 receptor (MST1R), a c-met-related tyrosine kinase, also known as the Ron receptor or CD136, controls cell survival and motility programs related to invasive growth. As the tyrosine kinase receptor is comprised of an extracellular domain, MST1R protein contains the ligand-binding pocket and an intracellular region where the kinase domain is located. MST1R signaling may be involved in the

regulation of macrophage and T-lymphocyte activation in vivo during injury. This assessment of gene expression indicates the importance of genetic factors in contributing to lung injury and points to strategies for intervention in the progression of inflammatory diseases. It had been shown that MST1R/CD136 plays a critical role in Ni-induced lung injury in mice. The overexpression of MSP, MT-SP1, and MST1R was a strong independent indicator of both metastasis and death in human breast cancer patients and significantly increased the accuracy of an existing gene expression signature for poor prognosis. Stimulation of MST1R leads to its transphosphorylation and the ultimate activation of numerous intracellular signaling pathways, such as the classical mitogen-activated protein kinase pathway, the phosphatidylinositol (PI)3-kinase pathway, and the JNK pathway.

Reference

Ronsin C,et al.(1993) A novel putative receptor protein tyrosine kinase of the met family. Oncogene. 8: 1195-1202.
McDowell SA,et al.(2002) The role of the receptor tyrosine kinase Ron in nickel-induced acute lung injury. Am J Respir Cell Mol Biol. 26(1): 99-104.
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Welm AL,et al.(2007) The macrophage-stimulating protein pathway promotes metastasis in a mouse model for breast cancer and predicts poor prognosis in humans. Proc Natl Acad Sci U S A. 104(18): 7570-5.