Data Sheet (Cat.No.TMPK-00571)

TargetMol

OSMR Protein, Canine, Recombinant (His)

General Information

Synonyms:	OSMRB;IL-31R-β;OSMR;OSMRBMGC150626;OSMR β;IL-31R subunit β;IL-31RB;IL-31R-beta;IL-31R subunit beta;OSMR beta;PLCA1
Protein Construction:	Glu28-Pro735
Species:	Canine
Expression Host:	HEK293 Cells
Accession:	A0A8I3MI11
Molecular Weight:	81.73 kDa (predicted). Due to glycosylation, the protein migrates to 110-130 kDa based on Tris-Bis PAGE result.

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
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, 8% trehalose is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

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

OSMR is targeted to the mitochondrial matrix via the presequence translocase-associated motor complex components, mtHSP70 and TIM44. OSMR interacts with NADH ubiquinone oxidoreductase 1/2 (NDUFS1/2) of complex I and promotes mitochondrial respiration. Deletion of OSMR impairs spare respiratory capacity, increases reactive oxygen species, and sensitizes BTSCs to IR-induced cell death.

Reference

Sharanek A, et al. OSMR controls glioma stem cell respiration and confers resistance of glioblastoma to ionizing radiation. Nat Commun. 2020 Aug 17;11(1):4116. doi: 10.1038/s41467-020-17885-z. PMID: 32807793; PMCID: PMC7431428.

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