Data Sheet (Cat.No.TMPY-03820)

TargetMol

NOV/CCN3 Protein, Canine, Recombinant (His)

General Information

Synonyms:	nephroblastoma overexpressed
Protein Construction:	A DNA sequence encoding the canine NOV(XP_532317.3) (Met1-Met353) was expressed with a C-terminal polyhistidine tag. Predicted N terminal: Gln 29
Species:	Canine
Expression Host:	HEK293 Cells
Accession:	A0A8C0RCV6
Molecular Weight:	36.9 kDa (predicted); 40-47 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:	> 85 % 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:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

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

Protein NOV homolog, also known as Nephroblastoma-overexpressed gene protein homolog, NOV, and CCN3, is a putative ligand for integrin receptors, is tightly associated with the extracellular matrix, and mediates diverse cellular functions, including cell adhesion and proliferation. CCN3 has been shown to negatively regulate growth although it promotes migration in a cell type-specific manner. This secreted protein belongs to the CCN family, and its expression was observed in a broad variety of tissues from the early stage of development, and altered

expression of CCN3 has been observed in a variety of tumors, including hepatocellular carcinomas, Wilm's tumors, Ewing's sarcomas, gliomas, rhabdomyosarcomas, and adrenocortical carcinomas. Mature CCN3 protein has five distinct modules and truncated protein variants with altered function are found in many cancers. CCN3 acts through the core stem cell signaling pathways including Notch and Bone Morphogenic Protein, connecting CCN3 with the modulation of self-renewal and maturation of some cell lineages including hematopoietic, osteogenic, and chondrogenic. CCN3 may affect the extracellular environment of the niche for hematopoietic stem cells. CCN3 has emerged as a key player in stem cell regulation, hematopoiesis, and a crucial component within the bone marrow microenvironment.

Reference

Manara MC,et al.(2002) The expression of ccn3(nov) gene in musculoskeletal tumors. Am J Pathol. 160(3): 849-59.
Lin CG,et al.(2003) CCN3 (NOV) is a novel angiogenic regulator of the CCN protein family. J Biol Chem. 278(26): 24200-8.
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