Data Sheet (Cat.No.TMPY-04279)

TargetMol

B7-H3 Protein, Mouse, Recombinant (His), Biotinylated

General Information

Synonyms:	AU016588;B7RP-2;6030411F23Rik;B7h3;CD276 molecule
Protein Construction:	A DNA sequence encoding the mouse CD276 (NP_598744.1) (Met1-Phe244) was expressed with a C-terminal polyhistidine tag. The purified protein was biotinylated in vitro. Predicted N terminal: Val 29
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	A6MDC5
Molecular Weight:	24.9 kDa (predicted); 40.9 kDa (reducing conditions)

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:	> 95 % 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, 5% trehalose, 5% mannitol. 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

B7-H3 is a member of the B7 family of immune regulatory ligands that is thought to attenuate peripheral immune responses through co-inhibition. It plays an important role in adaptive immune responses, and was shown to either promote or inhibit T-cell responses in various experimental systems. B7-H3 may play an important role in muscle-immune interactions, providing further evidence of the active role of muscle cells in local

immunoregulatory processes. B7-H3 is a novel protein structurally related to the B7 family of ligands by the presence of a single set of immunoglobulin-V-like and immunoglobulin-C-like (VC) domains. Previous studies have correlated its overexpression with poor prognosis and decreased tumor-infiltrating lymphocytes in various carcinomas including uterine endometrioid carcinomas, and mounting evidence supports an immuno-inhibitory role in ovarian cancer prognosis. Recently, B7-H3 expression has been reported in several human cancers indicating an additional function of B7-H3 as a regulator of antitumor immunity.Cancer ImmunotherapyCo-inhibitory Immune Checkpoint TargetsImmune CheckpointImmune Checkpoint Detection: AntibodiesImmune Checkpoint Detection: ELISA AntibodiesImmune Checkpoint Detection: FCM AntibodiesImmune Checkpoint Detection: ICC AntibodiesImmune Checkpoint Detection: IP AntibodiesImmune Checkpoint Detection: WB AntibodiesImmune Checkpoint TargetsImmunotherapyTargeted Therapy

Reference

Suh WK,et al.(2004) The immune regulatory protein B7-H3 promotes osteoblast differentiation and bone mineralization. Proc Natl Acad Sci U S A. 101(35): 12969-73.

Waschbisch A,et al.(2008) Human muscle cells express the costimulatory molecule B7-H3, which modulates muscle-immune interactions. Arthritis Rheum. 58(11): 3600-8.

Loos M,et al.(2010) B7-h3 and its role in antitumor immunity. Clin Dev Immunol. 2010: 683875.

Zang X,et al.(2010) Tumor associated endothelial expression of B7-H3 predicts survival in ovarian carcinomas. Mod Pathol. 23(8): 1104-12.

Sun J,et al.(2010) Clinical significance and regulation of the costimulatory molecule B7-H3 in human colorectal carcinoma. Cancer Immunol Immunother. 59(8): 1163-71.