Data Sheet (Cat.No.TMPY-03032)

TargetMol

CD24 Protein, Rat, Recombinant (hFc)

General Information

Synonyms:	CD24 molecule;CD24;Cd24a
Protein Construction:	A DNA sequence encoding the rat CD24 (Q07490) (Met1-Cys55) was expressed, fused with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Asn 27
Species:	Rat
Expression Host:	HEK293 Cells
Accession:	Q07490
Molecular Weight:	29.9 kDa (predicted); 43-48 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:	> 90 % 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

The cluster of differentiation (CD) system is commonly used as cell markers in Immunophenotyping. Different kinds of cells in the immune system can be identified through the surface CD molecules associating with the immune function of the cell. There are more than 320 CD unique clusters and subclusters have been identified. Some of the CD molecules serve as receptors or ligands important to the cell through initiating a signal cascade which then alter the behavior of the cell. Some CD proteins do not take part in cell signal process but have other functions

such as cell adhesion. Cluster of differentiation 24, also known as signal transducer CD24 or heat stable antigen CD24 (HSA), is a mucin-type glycosylphosphatidylinositol-linked glycoprotein expressed on the surface of B-cells, differentiating neuroblasts and many tumors. It is involved in molecular adhesion and metastatic tumor spread and serve as a normal receptor for P-selectin. The CD24 / P-selectin pathway could be important in disseminating tumor cells by facilitating the interaction with platelet and endothelial cells. It has also been considered as a tumor marker. High rate of CD24 expressions have been found in epithelial ovarian cancer, breast cancer, non-small cell lung cancer, prostate cancer and pancreatic cancer.

Reference

Zola H,et al.(2007) CD molecules 2006-human cell differentiation molecules. J Immunol Methods. 318 (1-2): 1-5.
Ho IC,et al.(2009) GATA3 and the T-cell lineage: essential functions before and after T-helper-2-cell differentiation. Nat Rev Immunol. 9 (2): 125-35.
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Kristiansen G,et al.(2003) Tumour biological aspects of CD24, a mucin-like adhesion molecule. Journal of molecular histology. 35 (3): 255-62.

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