Data Sheet (Cat.No.TMPY-03834)

Fas/CD95 Protein, Cynomolgus, Recombinant (hFc)

General Information

Synonyms:	Fas cell surface death receptor
Protein Construction:	A DNA sequence encoding the cynomolgus FAS (F6V1W6) (Met1-Asp173) was expressed with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Gln 26
Species:	Cynomolgus
Expression Host:	HEK293 Cells
Accession:	F6V1W6
Molecular Weight:	43.8 kDa (predicted); 47-57 kDa (reducing conditions)

QC Testing

Biological Activity:	1. Measured by its ability to inhibit Fas Ligand induced apoptosis of Jurkat human acute T cell leukemia cells. The ED50 for this effect is typically 0.5-3 μg/mL in the presence of 200 ng/mL recombinant human Fas ligand. 2. Measured by its binding ability in a functional ELISA. Immobilized human His-FASLG at 10 μg/ml (100 μl/well) can bind Cynomolgus FAS-Fc. The EC50 of Cynomolgus FAS-Fc is 0.06-0.14 μg/ml.
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. 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

CD95 (APO-1/Fas) is an important inducer of the extrinsic apoptosis signaling pathway and therapy induced apoptosis of many tumor cells has been linked to the activity of CD95. is a prototype death receptor characterized by the presence of an 80 amino acid death domain in its cytoplasmic tail. This domain is essential for the recruitment of a number of signaling components upon activation by either agonistic anti-CD95 antibodies or cognate CD95 ligand that initiate apoptosis. The complex of proteins that forms upon triggering of CD95 is called the death-inducting signaling complex (DISC). The DISC consists of an adaptor protein and initiator caspases and is essential for induction of apoptosis. CD95 is also crucial for the negative selection of B cells within the germinal center (GC). Impairment of CD95-mediated apoptosis results in defective affinity maturation and the persistence of autoreactive B-cell clones. Changes in the expression of CD95 and/or its ligand CD95L are frequently found in human cancer. The downregulation or mutation of CD95 has been proposed as a mechanism by which cancer cells avoid destruction by the immune system through reduced apoptosis sensitivity. Thus, CD95 has therefore been viewed as a tumor suppressor. CD95 has been reported to be involved in the activation of NF-kappaB, MAPK3/ERK1, MAPK8/JNK, and the alternate pathways for CTL-mediated cytotoxicity. Accordingly, this protein is implicated in the pathogenesis of various malignancies and diseases of the immune system. The CD95/CD95L system was implicated in the etiology of inflammatory bowel disease (IBD) based, primarily, on the finding that CD95 is highly expressed in the intestinal epithelial cells and that epithelial apoptosis is increased in IBD.

Reference

Mschen M,et al.(2002) The origin of CD95-gene mutations in B-cell lymphoma. Trends Immunol. 23(2): 75-80.
Peter ME,et al.(2005) Does CD95 have tumor promoting activities Biochim Biophys Acta. 1755(1): 25-36.
Chen L,et al.(2010) Cell death in the colonic epithelium during inflammatory bowel diseases: CD95/Fas and beyond. Inflamm Bowel Dis. 16(6): 1071-6.