Rat CD55 / DAF Protein (Fc Tag)

Catalog Number: **80317-R02H**

General Information

Gene Name Synonym:

CD55

Protein Construction:

A DNA sequence encoding the rat CD55 (Q9Z0M0) (Met1-Ser371) was expressed, fused with the Fc region of human IgG1 at the C-terminus.

Source: Rat

Expression Host: HEK293 Cells

QC Testing

Purity: > 82 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Asp 35

Molecular Mass:

The recombinant rat CD55/Fc is a disulfide-linked homodimer. The reduced monomer comprises 578 amino acids and has a predicted molecular mass of 64.5 kDa. The apparent molecular mass of the protein is approximately 91 and 54 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

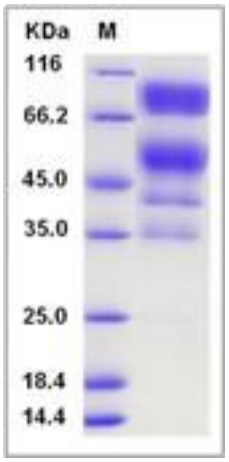
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

CD55, also well known as decay-accelerating factor (DAF), is a member of the RCA (regulators of complement activation) family characterized by four to 30 SCRs (short consensus repeats) in their plasma-exposed regions. It is a major regulator of the alternative and classical pathways of complement activation and is expressed on all serum-exposed cells. CD55 is physiologically acting as an inhibitor of the complement system, but is also broadly expressed in malignant tumours. DAF seems to exert different functions beyond its immunological role such as promotion of tumorigenesis, decrease of complement mediated tumor cell lysis, autocrine loops for cell rescue and evasion of apoptosis, neoangiogenesis, invasiveness, cell motility. It is commonly hijacked by invading pathogens, including many enteroviruses and uropathogenic Escherichia coli, to promote cellular attachment prior to infection. This 70-75 kDa glycoprotein CD55 containing four SCR modules is involved in the regulation of the complement cascade. It inhibits complement activation by suppressing the function of C3/C5 convertases, thereby limiting local generation or deposition of C3a/C5a and membrane attack complex (MAC or C5b-9) production. DAF has been identified as a ligand for an activation-associated, seven-transmembrane lymphocyte receptor, CD97, which is a receptor mediating attachment and infection of several viruses and bacteria. In addition, it has been shown that DAF regulates the interplay between complement and T cell immunity in vivo, and thus may be implicated in immune and tumor biology.

References

1.Lea S. (2002) Interactions of CD55 with non-complement ligands. Biochem Soc Trans. 30(Pt 6): 1014-9. 2.Mikesch JH, *et al.* (2006) The expression and action of decay-accelerating factor (CD55) in human malignancies and cancer therapy. Cell Oncol. 28(5-6): 223-32. 3.Wang Y, *et al.* (2010) Decay accelerating factor (CD55) protects neuronal cells from chemical hypoxia-induced injury. J Neuroinflammation. 7:24.