Data Sheet (Cat.No.TMPY-01675)

TargetMol

RAGE Protein, Mouse, Recombinant (His)

General Information

Synonyms:	advanced glycosylation end product-specific receptor;RAGE
Protein Construction:	A DNA sequence encoding the extracellular domain of mouse AGER (NP_031451.2) extracellular domain (Met 1-Ala 342) was expressed, with a polyhistidine tag at the C-terminus. Predicted N terminal: Gln 24
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q62151-1
Molecular Weight:	35.3 kDa (predicted); 48 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured by its ability to bind mouse HMGB1-Fc in functional ELISA.
Purity:	≥ 96 % as determined by SDS-PAGE. ≥ 85 % as determined by SEC-HPLC.
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

Receptor for Advanced Glycosylation End Products (RAGE, or AGER) is a member of the immunoglobulin super-family transmembrane proteins, as a signal transduction receptor which binds advanced glycation endproducts, certain members of the S100/calgranulin family of proteins, high mobility group box 1 (HMGB1), advanced oxidation protein products, and amyloid (beta-sheet fibrils). Initial studies investigating the role of RAGE in renal

dysfunction focused on diabetes, neurodegenerative disorders, and inflammatory responses. However, RAGE also has roles in the pathogenesis of renal disorders that are not associated with diabetes, such as obesity-related glomerulopathy, doxorubicin-induced nephropathy, hypertensive nephropathy, lupus nephritis, renal amyloidosis, and ischemic renal injuries. RAGE represents an important factor in innate immunity against pathogens, but it also interacts with endogenous ligands, resulting in chronic inflammation. RAGE signaling has been implicated in multiple human illnesses, including atherosclerosis, arthritis, Alzheimer's disease, atherosclerosis and aging associated diseases.

Reference

Zhou Z,et al.(2011) RAGE and its ligands in bone metabolism. Front Biosci (Schol Ed). 3: 768-76.
Mosquera JA. (2010) Role of the receptor for advanced glycation end products (RAGE) in inflammation]. Invest Clin. 51(2): 257-68.
D'Agati V,et al.(2010) RAGE and the pathogenesis of chronic kidney disease. Nat Rev Nephrol. 6(6): 352-60.