

# Active Recombinant Rat Advanced Glycosylation End Product-Specific Receptor, Fc-tagged

**Cat. No.** Ager-540R    **Lot. No.** (See product label)

## SPECIFICATION

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| <b>Product Overview</b>   | Recombinant Rat Agerprotein was expressed in Murine myeloma cell line with the Fc part of RatRAGE Gln24-Ala342 (N-terminus) and Human IgG1 Pro100-Lys330 (C-terminus).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Species</b>            | Rat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Source</b>             | Mammalian Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>ProteinLength</b>      | 24-342 a.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Description</b>        | <p>Advancedglycation endproducts (AGEs) are adducts formed by the nonenzymatic glycationof macromolecules. Ager formation is acceleratedin oxidative and hyperglycemic conditions, diabetes, renal failure,atherosclerosis, Alzheimer's disease, arthritis, and in normal aging. Receptorfor advanced glycation endproducts (Ager) isa 35 kDa type I transmembrane protein belonging the immunoglobulinsuperfamily. Besides AGEs, Ager bindsβamyloid peptide, S100/calgranulin family proteins, HMGB1/amphoterin, andleukocyte integrins. Mature rat Agerconsists of a 319 amino acid (aa) extracellular domain (ECD) with one Iglike V-typedomain and two Ig-like Ctype domains, a 21 aa transmembrane segment, and a 40aa cytoplasmic domain.</p> |
| <b>Form</b>               | Lyophilized from a0.2 µm filtered solution in PBS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>N-terminalSequence</b> | Gln24 predicted                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

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|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Molecular Weight</b> | 60 kDa (monomer)                                                                                                                                                                                                                                                                             |
| <b>Activity</b>         | Measured by its binding ability in a functional ELISA. rr Ager/Fc Chimera immobilized at 5µg/mL (100 µL/well) on a goat antihuman IgG Fc antibodycoated plate (0.5µg/well) can bind biotinylated advanced glycation endproducts of bovine serumalbumin with a linear range of 0.02-15 µg/mL. |
| <b>Endotoxin Level</b>  | < 1.0EU per 1 µg of the protein by the LAL method.                                                                                                                                                                                                                                           |
| <b>SDS-PAGE</b>         | 80-90 kDa, reducing conditions.                                                                                                                                                                                                                                                              |
| <b>Purity</b>           | > 95%, by SDS-PAGE under reducing conditions and visualized by silver stain.                                                                                                                                                                                                                 |
| <b>Reconstitution</b>   | 100µg/mL in sterile PBS.                                                                                                                                                                                                                                                                     |
| <b>Storage</b>          | Use a manualdefrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70°C as supplied. 1 month, 2 to 8°C under sterile conditions after reconstitution. 3 months, -20 to -70°C under sterile conditions after reconstitution.                          |

## GENE INFORMATION

|                        |                                                                                                                                                                                                                                                                                                                   |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | Ager advanced glycosylation endproduct-specific receptor [ Rattus norvegicus ]                                                                                                                                                                                                                                    |
| <b>Official Symbol</b> | Ager                                                                                                                                                                                                                                                                                                              |
| <b>Synonyms</b>        | Ager; advancedglycosylation end product-specific receptor; RAGE; receptor for advanced glycosylation end products; advanced glycosylation end product-specific receptor variant 2; advanced glycosylation end product-specific receptor variant 3; advanced glycosylation end product-specific receptor variant 5 |

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|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene ID</b>             | 81722                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>mRNA Refseq</b>         | NM_053336                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Protein Refseq</b>      | NP_445788                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Chromosome Location</b> | 20p12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Pathway</b>             | Activated TLR4signalling; Immune System; Innate Immune System; MyD88 cascade initiated onplasma membrane; MyD88 dependent cascade initiated on endosome; MyD88-independentcascade initiated on plasma membrane; MyD88:Mal cascade initiated on plasmamembrane; NFkB and MAP kinases activation mediated by TLR4 signalingrepertoire; RIG-I/MDA5 mediated induction of IFN-alpha/beta pathways; TAK1activates NFkB by phosphorylation and activation of IKKs complex; TRAF6Mediated Induction of proinflammatory cytokines; TRAF6 mediated NF-kBactivation; TRAF6 mediated induction of NFkB and MAP kinases upon TLR7/8 or 9activation; Toll Like Receptor 10 (TLR10) Cascade; Toll Receptor Cascades |
| <b>Function</b>            | S100 alpha binding;S100 beta binding; advanced glycation end-product receptor activity; proteinbinding; receptor activity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |