

Recombinant Rat CCL7 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52592

Size: 10ug, 100ug

Protein Name: C-C motif chemokine 7 (Monocyte chemoattractant protein 3) (Monocyte chemotactic protein 3) (MCP-3) (Small-inducible cytokine A7)

Synonym: Ccl7, Mcp3, Scya7

UniProt ID: Q9QXY8

UniProt Link: www.uniprot.org/uniprotkb/Q9QXY8/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 97 AA

Molecular Weight: 11 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MQISAALLCVLLTAAFTVHVWAQPDGTNSSTCCYVKKQKIPKRNLKSYRKITSSRCPWEAVIFKTKK
GMEVCAEAHQKWVEEAIAYLDMKTSTPKP

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant C-C motif chemokine 7 (Monocyte chemoattractant protein 3) (Monocyte chemotactic protein 3) (MCP-3) (Small-inducible cytokine A7) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Chemotactic factor that plays an important role in immune regulation. Attracts monocytes, eosinophils, basophils, and T-cells to sites of inflammation or infection. Upon binding to various chemokine receptors including CCR1, CCR2, CCR3, and CCR5, facilitates immune cell migration by guiding them to infected tissues. Interacts with CCR2 to facilitate the release of monocytes from the bone marrow into the bloodstream, maintaining monocyte homeostasis. In turn, monocytes recruited to inflamed or injured tissues can differentiate into macrophages or dendritic cells, which are essential for immune defense and tissue repair. Through CCR1, contributes to macrophage polarization via NF-kappa-B activation which leads to the release of inflammatory factors. In the trigeminal ganglion neurons, activates ERK via CCR2 and CCR3 to enhance neuronal excitability, which contributes to the maintenance of trigeminal neuropathic pain. Additionally, modulates the early immune response in the skin, preventing pathogen dissemination while maintaining cutaneous immune control.

Subcellular Localization: Secreted.

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.