

Recombinant Rat CD47 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52433

Size: 10ug, 100ug

Protein Name: Leukocyte surface antigen CD47 (Integrin-associated protein) (IAP) (CD antigen CD47)

Synonym: Cd47

UniProt ID: P97829

UniProt Link: www.uniprot.org/uniprotkb/P97829/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 303 AA

Molecular Weight: 33 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MWPLAAALLLGSCCCGSAQLLLSKVKSV EFTSCNDTVVIPCKVLNVEAQSTDEM FVKWKLNKS YIFIY
DGNKNSTTREQNFTSAKISVSDLLKGIASLTMDTHEAVVGNYTCEVTELSREGKT VIELKNRPVSWFS
TNEKILIVIFPILAILLFWGKFGILT LKYKSSHTNKRIILLVAGLALT LIVVVGAILFIPGEKPVKNASGLGLI
VISTGILILLQYNVFMTAFGMTSFTIAILITQVLGYVLAVVGMCLCIMACEPVHGPLLISGLGIIALAELLG
LVYMKFVASNQRTIQPPRNN

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 Leukocyte surface antigen CD47 (Integrin-associated protein) (IAP) (CD antigen CD47) 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: Adhesive protein that mediates cell-to-cell interactions. Acts as a receptor for thrombospondin THBS1 and as modulator of integrin signaling through the activation of heterotrimeric G proteins. Involved in signal transduction, cardiovascular homeostasis, inflammation, apoptosis, angiogenesis, cellular self-renewal, and immunoregulation. Plays a role in modulating pulmonary endothelin EDN1 signaling (By similarity). Modulates nitrous oxide (NO) signaling, in response to THBS1, hence playing a role as a pressor agent, supporting blood pressure (By similarity). Plays an important role in memory formation and synaptic plasticity in the hippocampus (PubMed:9592107). Receptor for SIRPA, binding to which prevents maturation of immature dendritic cells and inhibits cytokine production by mature dendritic cells. Interaction with SIRPG mediates cell-cell adhesion, enhances superantigen-dependent T-cell-mediated proliferation and costimulates T-cell activation (By similarity). Positively modulates FAS-dependent apoptosis in T-cells, perhaps by enhancing FAS clustering (By similarity). Plays a role in suppressing angiogenesis and may be involved in metabolic dysregulation during normal aging (By similarity). In response to THBS1, negatively modulates wound healing. Inhibits stem cell self-renewal, in response to THBS1, probably by regulation of the stem cell transcription factors POU5F1/OCT4, SOX2, MYC/c-Myc and KLF4 (By similarity). May play a role in membrane transport and/or integrin dependent signal transduction (By similarity). May prevent premature elimination of red blood cells (By similarity).

Subcellular Localization: Cell membrane ; Multi-pass membrane protein .

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.