

Recombinant Mouse NRAM1 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51411

Size: 10ug, 100ug

Protein Name: Natural resistance-associated macrophage protein 1 (NRAMP 1) (Solute carrier family 11 member 1)

Synonym: Slc11a1, Bcg, Ity, Lsh, Nramp1

UniProt ID: P41251

UniProt Link: www.uniprot.org/uniprotkb/P41251/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 548 AA

Molecular Weight: 60 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MISDKSPPRLSRPSYGSISLPGPAPQPAPCRETYLSEKIPIPSADQGTFSRLKLWAFTGPGFLMSIAF
LDPGNIESDLQAGAVAGFKLLWLLWATVLGLLCQRLAARLGVVTGKDLGEVCHLYYPKVPRILLWL
TIELAIVGSDMQEVIGTAISFNLLSAGRIPLWDGVLITIVDTFFFLFDNYGLRKLEAFFGLITIMALTFG
YEYVVAHPSQGALLKGLVLPTCPGCGQPELLQAVGIVGAIIMPHNIYLHSALVKSREVDRTTRVDVRE
ANMYFLIEATIALSVSFIINLFVMAVFGQAFYQQTNEEAFNICANSSLQNYAKIFPRDNNTVSVDIYQG
GVILGCLFGPAALYIWAVGLLAAGQSSTMTGTYAGQFVMEGFLKLRWSRFARVLLTRSCAILPTVLVA
VFRDLKDLGLNDLLNVLQSLLLPFAVLPILTFTSMPAVMQEFANGRMSKAITSCIMALVCAINLYFVIS
YLPSLPHPAYFGLVALFAIGYLGLTAYLAWTCCIAHGATFLTHSSHKHFLYGLPNEEQGGVQGS

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 Natural resistance-associated macrophage protein 1 (NRAMP 1) (Solute carrier family 11 member 1) 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: Antiporter that transports metal ions against a proton gradient, and which promotes host resistance to infection against intracellular parasites, such as *M.bovis*, *S.typhimurium* and *L.donovani* (PubMed:11067873, PubMed:11237855, PubMed:31753999, PubMed:8757814). Plays a key role in pathogen resistance in macrophages by mediating the export of metal ions from the phagosomal compartment, thereby limiting the nutrients available to intracellular pathogens and restricting their growth (PubMed:31753999). Also promotes antimicrobial activity in neutrophils against pathogens that survive within phagocytic cells (PubMed:38374245).

Subcellular Localization: Cytoplasmic vesicle, phagosome membrane ; Multi-pass membrane protein . Late endosome membrane ; Multi-pass membrane protein . Lysosome membrane ; Multi-pass membrane protein . Note=After infection, vesicles migrate to the site of bacterial phagosomes.

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.