

Recombinant Human ITA4 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50575

Size: 10ug, 100ug

Protein Name: Integrin alpha-4 (CD49 antigen-like family member D) (Integrin alpha-IV) (VLA-4 subunit alpha) (CD antigen CD49d)

Synonym: ITGA4, CD49D

UniProt ID: P13612

UniProt Link: www.uniprot.org/uniprotkb/P13612/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 1032 AA

Molecular Weight: 115 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MAWEARREPGPRRAAVRETVMLLLCLGVPTGRPYNVDTESALLYQGPHNTLFGYSVVLHSHGANR
WLLVGAPTANWLANASVINPGAIYRCRIGKNPGQTCEQLQLGSPNGEPCGKTCLEERDNQWLGVTL
SRQPGENGSIIVTCGHRWKNIFYIKNENKLPTGGCYGVPPDLRTELSKRIAPCYQDYVKKFGENFASC
QAGISSFYTKDLIVMGAPGSSYWTGSLFVYNITTNKYKAFLDKQNQVKFGSYLGYSVGAGHFRSQHT
TEVVGGAQHEQIGKAYIFSIDEKELNILHEMKGKKLGSYFGASVCAVDLNADGFSDLLVGAPMQSTI
REEGRVFVYINSGSGAVMNAMEETNLVGSCKYARFGESIVNLGDIIDNDGFEDVAIGAPQEDDLQGA
YIYNGRADGISSTFSQRIEGLQISKLSMFGQSISGQIDADNNGYVDVAVGAFRSDSAVLLRTRPVVIV
DASLSHPESVNRTKFDCVENGWPSVCIDLTLCFYSYKGKEVPGYIVLFYNMSLDVNRAESPPRFYFS
SNGTSDVITGSIQVSSREANCRTHQAAMRKDVRDILTPIQIEAAYHLGPHVISKRSTEEFPPLQPILQQ
KKEKDIMKKTINFARFCAHENCASADLQVSAKIGFLKPHENKTYLAVGSMKTLMLNVSLFNAGDDAYET
TLHVKLPVGLYFIKILEEEKQINCEVTDNSGVVQLDCSIGYIYVDHLSTRIDISFLLDVSSLSRAEEDLSIT
VHATCENEEEMDNLKHRSRTVAIPLKYEKLTVHGFVNPTSFVYGSNDENEPETCMVEKMNLTFHVI
NTGNSMAPNVSVIEMVNSFSPTDKLFNILDVQTTTGECHFENYQRVCALEQQKSAMQTLKGIVRF
LSKTDKRLLYCIKADPHCLNFCNFGKMESGKEASVHIQLEGRPSILEMDETSALKFEIRATGFPEPN
PRVIELNKDENVAHVLLLEGLHHQRPKRYFTIVISSSLLLGLIVLLLISYVMWKAGFFKRQYKSILQEEN
RRDSWSYINSKSNDD

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 Integrin alpha-4 (CD49 antigen-like family member D) (Integrin alpha-IV) (VLA-4 subunit alpha) (CD antigen CD49d) 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: Integrins alpha-4/beta-1 (VLA-4) and alpha-4/beta-7 are receptors for fibronectin. They recognize one or more domains within the alternatively spliced CS-1 and CS-5 regions of fibronectin. They are also receptors for VCAM1. Integrin alpha-4/beta-1 recognizes the sequence Q-I-D-S in VCAM1. Integrin alpha-4/beta-7 is also a receptor for MADCAM1. It recognizes the sequence L-D-T in MADCAM1. On activated endothelial cells integrin VLA-4 triggers homotypic aggregation for most VLA-4-positive leukocyte cell lines. It may also participate in cytolytic T-cell interactions with target cells. ITGA4:ITGB1 binds to fractalkine (CX3CL1) and may act as its coreceptor in CX3CR1-dependent fractalkine signaling (PubMed:23125415). ITGA4:ITGB1 binds to PLA2G2A via a site (site 2) which is distinct from the classical ligand-binding site (site 1) and this induces integrin conformational changes and enhanced ligand binding to site 1 (PubMed:18635536, PubMed:25398877). Integrin ITGA4:ITGB1 represses PRKCA-mediated L-type voltage-gated channel Ca(2+) influx and ROCK-mediated calcium sensitivity in vascular smooth muscle cells via its interaction with SVEP1, thereby inhibiting vasocontraction (PubMed:35802072).

Subcellular Localization: Membrane ; Single-pass type I 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.