

Recombinant Rat FGR Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52532

Size: 10ug, 100ug

Protein Name: Tyrosine-protein kinase Fgr (EC 2.7.10.2) (Proto-oncogene c-Fgr) (p55-Fgr)

Synonym: Fgr

UniProt ID: Q6P6U0

UniProt Link: www.uniprot.org/uniprotkb/Q6P6U0/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 517 AA

Molecular Weight: 59 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MGCVFCKKLEPAPKEDVGLEGDFRSQGAEEYYPDPTQGRSSSISPQPISPAFLNVGNIRSVSGTG
VTIFVALDYDEARTGDDLTFTKGEKFHILNNTHEYDWWEARSLSSGRTGYVPSNYVAPVDSIQAE EWY
FGKISRKDAERQLLSGDNPPQGAFLIRESETTKGAYSLIRDWDQNRGDHIKHYKIRKLDMMGGYYITTR
AQFESVQDLVRHYMEVNDGLCYLLTAPCMVMKPQTLGLAKDAWEIDRNSIALDRRLGTGCFGDVWL
GTWNCSTKVAVKTLKPGTMSPKAFLEEAQIMKLLRHDKLVQLYAVVSEPIYIVTEFMCYGSLLDFLK
DRKGHNLMPLNLVDMAAQVAEGMAYMERMNYIHRDLRAANILVGEHLICKIADFGLARLIVDDEYNP
QQGTFKPIKWTAPAEALFGRFTVKSDVWSFGILLTELITKGRVPYPGMNNREVLEQVEHGYHMPCP
PGCPVSLYEVMEQTWRLDPEERPTFEYLQSFLDYFTSTEPQYQPGDQT

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 Tyrosine-protein kinase Fgr (EC 2.7.10.2) (Proto-oncogene c-Fgr) (p55-Fgr) 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: Non-receptor tyrosine-protein kinase that transmits signals from cell surface receptors devoid of kinase activity and contributes to the regulation of immune responses, including neutrophil, monocyte, macrophage and mast cell functions, cytoskeleton remodeling in response to extracellular stimuli, phagocytosis, cell adhesion and migration. Promotes mast cell degranulation, release of inflammatory cytokines and IgE-mediated anaphylaxis. Acts downstream of receptors that bind the Fc region of immunoglobulins, such as MS4A2/FCER1B, FCER1G and FCGR2. Acts downstream of ITGB1 and ITGB2, and regulates actin cytoskeleton reorganization, cell spreading and adhesion. Depending on the context, activates or inhibits cellular responses. Functions as a negative regulator of ITGB2 signaling, phagocytosis and SYK activity in monocytes. Required for normal ITGB1 and ITGB2 signaling, normal cell spreading and adhesion in neutrophils and macrophages. Functions as a positive regulator of cell migration and regulates cytoskeleton reorganization via RAC1 activation. Phosphorylates SYK (in vitro) and promotes SYK-dependent activation of AKT1 and MAP kinase signaling. Phosphorylates PLD2 in antigen-stimulated mast cells, leading to PLD2 activation and the production of the signaling molecules lysophosphatidic acid and diacylglycerol. Promotes activation of PIK3R1. Phosphorylates FASLG, and thereby regulates its ubiquitination and subsequent internalization. Phosphorylates ABL1. Promotes phosphorylation of CBL, CTTN, PIK3R1, PTK2/FAK1, PTK2B/PYK2 and VAV2 (By similarity). Phosphorylates HCLS1 that has already been phosphorylated by SYK, but not unphosphorylated HCLS1. Together with CLNK, it acts as a negative regulator of natural killer cell-activating receptors and inhibits interferon-gamma production (By similarity).

Subcellular Localization: Cell membrane ; Lipid-anchor ; Cytoplasmic side . Cell membrane; Peripheral membrane protein; Cytoplasmic side. Cell projection, ruffle membrane . Cytoplasm, cytosol . Cytoplasm, cytoskeleton . Mitochondrion inner membrane. Mitochondrion intermembrane space. Note=Colocalizes with actin fibers at membrane ruffles (By similarity). Detected at plasma membrane lipid rafts. Detected in mitochondrial intermembrane space and at inner membranes.

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.