

FGR Protein, Human (Sf9, GST)

Cat. No.:	HY-P701684
Synonyms:	FGR; Tyrosine-protein kinase Fgr; Gardner-Rasheed feline sarcoma viral (v-fgr) oncogene homolog; Proto-oncogene c-Fgr; p55-Fgr; p58-Fgr; p58c-Fgr
Species:	Human
Source:	Sf9 insect cells
Accession:	P09769 (G2-T529)
Gene ID:	2268
Molecular Weight:	

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 µm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	Please use rapid thawing with running water to thaw the protein.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	<p>FGR Protein, a non-receptor tyrosine-protein kinase, serves as a pivotal mediator in immune regulation across various cell types, including neutrophils, monocytes, macrophages, and mast cells. It facilitates signal transmission from cell surface receptors lacking kinase activity, orchestrating essential cellular functions such as cytoskeleton remodeling, phagocytosis, cell adhesion, and migration. Functionally versatile, FGR Protein acts downstream of receptors binding the Fc region of immunoglobulins (MS4A2/FCER1B, FCGR2A, and/or FCGR2B), as well as ITGB1 and ITGB2, finely tuning actin cytoskeleton organization, cell spreading, and adhesion. Its role is context-dependent, either activating or inhibiting cellular responses. Notably, in monocytes, FGR Protein acts as a negative regulator, dampening ITGB2 signaling, phagocytosis, and SYK activity. Furthermore, it is indispensable for normal ITGB1 and ITGB2 signaling, maintaining typical cell spreading and adhesion in neutrophils and macrophages. FGR Protein positively influences cell migration, directing cytoskeleton reorganization through RAC1 activation. It engages in phosphorylation events, impacting pathways involving SYK, PLD2, AKT1, MAP kinase, PIK3R1, FASLG, ABL1, CBL, CTTN, PTK2/FAK1, PTK2B/PYK2, and VAV2. Additionally, in collaboration with CLNK, it acts as a negative regulator of natural killer cell-activating receptors, thereby suppressing interferon-gamma production.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

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