Gq-BTK complex dissociates to Active BTK and Gq

Huang, X., Varusai, TM.
Introduction

Reactome is open-source, open access, manually curated and peer-reviewed pathway database. Pathway annotations are authored by expert biologists, in collaboration with Reactome editorial staff and cross-referenced to many bioinformatics databases. A system of evidence tracking ensures that all assertions are backed up by the primary literature. Reactome is used by clinicians, geneticists, genomics researchers, and molecular biologists to interpret the results of high-throughput experimental studies, by bioinformaticians seeking to develop novel algorithms for mining knowledge from genomic studies, and by systems biologists building predictive models of normal and disease variant pathways.

The development of Reactome is supported by grants from the US National Institutes of Health (P41 HG003751), University of Toronto (CFREF Medicine by Design), European Union (EU STRP, EMI-CD), and the European Molecular Biology Laboratory (EBI Industry program).

Literature references


Reactome database release: 78

This document contains 1 reaction (see Table of Contents)

https://reactome.org
Gq-BTK complex dissociates to Active BTK and Gq

Stable identifier: R-HSA-8964340

Type: dissociation

Compartments: cytosol

G-Protein Coupled Receptors (GPCR) sense extracellular signals and activate different Guanine nucleotide binding proteins. Upon activation, the Guanine nucleotide-binding protein G(q) subunit alpha class (GNAQ/GNA11/GNA14/GNA15) can bind to the non-receptor Tyrosine-protein kinase BTK. This binding results in a conformational change in BTK. Subsequently, the structurally modified BTK is released from GNAQ and is now catalytically active. Active BTK can trigger the downstream MAPK p38 pathway. Physiologically, BTK plays a key role in B lymphocyte development, differentiation and signalling.

Literature references


Editions

<table>
<thead>
<tr>
<th>Date</th>
<th>Action</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017-07-27</td>
<td>Authored, Edited</td>
<td>Varusai, TM.</td>
</tr>
<tr>
<td>2018-09-13</td>
<td>Reviewed</td>
<td>Huang, X.</td>
</tr>
</tbody>
</table>

https://reactome.org