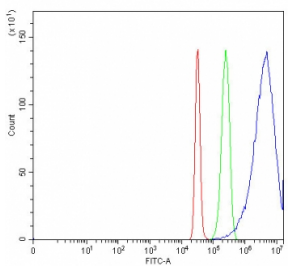
# GJB1 Antibody / Gap Junction Beta-1 Protein Antibody (RQ8015)

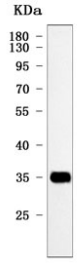
| Catalog No. | Formulation | Size |
|---|---|---|
| RQ8015 | 0.5mg/ml if reconstituted with 0.2ml sterile DI water | 100 ug |

**Bulk quote request**

| | |
|---|---|
| **Availability** | 1-3 business days |
| **Species Reactivity** | Human |
| **Format** | Antigen affinity purified |
| **Host** | Rabbit |
| **Clonality** | Polyclonal (rabbit origin) |
| **Isotype** | Rabbit IgG |
| **Purity** | Antigen affinity purified |
| **Buffer** | Lyophilized from 1X PBS with 2% Trehalose |
| **UniProt** | P08034 |
| **Applications** | Western blot: 0.5-1ug/ml<br>Flow cytometry: 1-3ug/million cells<br>Direct ELISA: 0.1-0.5ug/ml |
| **Limitations** | This GJB1 Antibody / Gap Junction Beta-1 Protein Antibody is available for research use only. |




GJB1 Antibody Human Liver Cancer Cell FACS. Flow cytometry testing of fixed and permeabilized human HepG2 cells using GJB1 antibody at 1 ug/million cells demonstrated a clear rightward shift (blue) compared with the isotype control (green), indicating specific intracellular detection of GJB1/Connexin 32. Cells were blocked with goat serum prior to antibody incubation. The red histogram represents unstained cells. This GJB1 Antibody, also called a Gap Junction Beta-1 Protein Antibody, is useful for studies of gap junction biology, intercellular communication, and connexin expression by flow cytometry.




GJB1 Antibody Human Liver Cancer Cell WB. Western blot testing of human HepG2 cell lysate using GJB1 antibody detected a prominent band at approximately 32 kDa, consistent with the predicted molecular weight of GJB1 (Connexin 32). The observed band is consistent with expression of the gap junction protein in hepatocytes, where GJB1 is the predominant connexin responsible for direct intercellular communication and coordinated liver function. This GJB1 Antibody, also called a Gap Junction Beta-1 Protein Antibody, is suitable for studies of gap junction biology, liver physiology, peripheral neuropathy, and connexin-mediated cell-cell communication.

## Description

GJB1 Antibody / Gap Junction Beta-1 Protein Antibody recognizes GJB1, the gene encoding Gap Junction Beta-1 Protein, more commonly known as Connexin 32 (Cx32). GJB1 belongs to the connexin family of transmembrane proteins that assemble into gap junction channels, allowing adjacent cells to exchange ions, metabolites, and other small signaling molecules. Six GJB1 protein subunits oligomerize to form a connexon, or hemichannel, which pairs with a connexon on a neighboring cell to establish a functional gap junction. These channels are essential for coordinated cellular communication, tissue homeostasis, and the maintenance of normal physiological function in numerous organs.

Gap Junction Beta-1 Protein is highly expressed in hepatocytes, Schwann cells, pancreatic acinar cells, renal tubular epithelium, and other epithelial tissues. Within the peripheral nervous system, GJB1 facilitates radial diffusion of ions and metabolites through compact myelin, supporting axonal maintenance and normal nerve conduction. In the liver, it represents the predominant connexin isoform and plays a central role in coordinating metabolic activity, regeneration, and responses to cellular injury. Expression and channel activity are regulated through phosphorylation, intracellular trafficking, and gap junction turnover, enabling tissues to rapidly adapt intercellular communication in response to physiological and pathological stimuli.

Mutations in the GJB1 gene are responsible for X-linked Charcot-Marie-Tooth disease type 1, one of the most common inherited peripheral neuropathies. Many pathogenic variants impair gap junction assembly, intracellular transport, or channel permeability, resulting in progressive demyelination, muscle weakness, and sensory deficits. Beyond inherited neuropathies, altered GJB1 expression has been associated with hepatocellular carcinoma, pancreatic cancer, liver injury, inflammatory disorders, and other diseases characterized by disrupted gap junction communication. Consequently, GJB1 remains an important research target in neuroscience, hepatology, oncology, and studies of intercellular signaling.

A GJB1 Antibody is a valuable research tool for investigating gap junction biology, cell-cell communication, peripheral neuropathies, liver physiology, and diseases involving altered connexin function.

For a broader overview of Connexin 32 biology, gap junction function, and intercellular communication, see our Connexin 32 Antibody / Cx32 Antibody page.

## Application Notes

Optimal dilution of the GJB1 Antibody / Gap Junction Beta-1 Protein Antibody should be determined by the researcher.

## Immunogen

E. coli-derived recombinant human protein (amino acids A92-A147) was used as the immunogen for the GJB1 antibody.

## Storage

After reconstitution, the GJB1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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