

# **Gap Junction Protein**

Gap junction (GJ) channels span the plasma membranes of adjacent cells and are formed by the docking of two hemichannels (connexons) oligomerized from connexin (Cx) proteins, which consist of 21 distinct isoforms. GJs provide a direct pathway for cell-to-cell electrical signaling and metabolic communication, allowing the passage of small ions, amino acids, metabolites, tetraethylammonium and signaling molecules such as cAMP, IP3, siRNA and small peptide.

Gap junction channels provide the basis for intercellular communication in the cardiovascular system for maintenance of the normal cardiac rhythm, regulation of vascular tone and endothelial function as well as metabolic interchange between the cells. In the heart, GJs mediate electrical coupling between cardiac myocytes, forming the cell-to-cell pathways for orderly spread of the wave of electrical excitation responsible for synchronous contraction. Gap junctions also play an important role in the control of bladder contractile response and in the regulation of various immune inflammatory processes.

# **Gap Junction Protein Inhibitors & Modulators**

# AT-1002

Cat. No.: HY-114426

AT-1002, a 6-mer synthetic peptide, is a tight junction regulator and absorption enhancer.

Purity: >98%

Clinical Data: No Development Reported

Size: 1 mg, 5 mg

## AT-1002 TFA

AT-1002 TFA, a 6-mer synthetic peptide, is a tight junction regulator and absorption enhancer.



Cat. No.: HY-114426A

99 72% Purity:

Clinical Data: No Development Reported

10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

## Carbenoxolone disodium

Cat. No.: HY-B1367

Carbenoxolone disodium is the active metabolite of Glycyrrhizic acid (HY-N0184) and the inhibitor of human  $11\beta$ -HSD and bacterial  $3\alpha$ ,  $20\beta$ -HSD. Carbenoxolone disodium is an uncoupling agent for gap junctions and a potent inhibitor of Vaccinia virus replication.



Purity: 99 88% Clinical Data: Launched

10 mM × 1 mL, 25 mg, 50 mg, 100 mg

#### Danegaptide

(GAP-134; ZP 1609)

Danegaptide (GAP-134) is a potent, selective and orally active gap-junction modifier with an antiarrhythmic effect.

Cat. No.: HY-10913

**Purity:** >98% Clinical Data: Phase 2 1 mg, 5 mg

#### Danegaptide Hydrochloride

(GAP-134 Hydrochloride; ZP 1609 Hydrochloride) Cat. No.: HY-10913A

Danegaptide Hydrochloride (GAP-134 Hydrochloride) is a potent, selective and orally active gap-junction modifier with an antiarrhythmic effect.

Purity: 99 75% Clinical Data: Phase 2

Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

#### Gap 26

Gap 26 is a connexin mimetic peptide, composed of residue numbers 63-75 of the first extracellular loop of connexin 43 (gap junction blocker), containing the SHVR amino acid motif.

VCYDKSFPISHVR

Cat. No.: HY-P1082

99.64% Purity:

Clinical Data: No Development Reported Size 1 mg, 5 mg, 10 mg

#### Gap 26 TFA

Cat. No.: HY-P1082A

Gap 26 TFA is a connexin mimetic peptide, composed of residue numbers 63-75 of the first extracellular loop of connexin 43 (gap junction blocker), containing the SHVR amino acid motif.

VCYDKSFPISHVR (TFA Salt)

99.03% Purity:

Clinical Data: No Development Reported Size: 1 mg, 5 mg, 10 mg

#### Gap 27

Gap 27, a synthetic connexin43 mimetic peptide, is a gap junction inhibitor. Gap 27 possesses conserved sequence homology to a portion of the second extracellular loop leading into the fourth transmembrane connexin segment.

**SRPTEKTIFII** 

Cat. No.: HY-P0139

Purity: 98.07%

Clinical Data: No Development Reported

1 mg, 5 mg

#### Gap19

Cat. No.: HY-P1136

Gap19, a peptide derived from nine amino acids of the Cx43 cytoplasmic loop (CL), is a potent and selective connexin 43 (Cx43) hemichannel blocker. Gap19 inhibits hemichannels caused by preventing intramolecular interactions of the C-terminus (CT) with the CL.



Purity: >98%

Clinical Data: No Development Reported

Size: 1 mg, 5 mg

#### Gap19 TFA

Cat. No.: HY-P1136A

Gap19 TFA, a peptide derived from nine amino acids of the Cx43 cytoplasmic loop (CL), is a potent and selective connexin 43 (Cx43) hemichannel blocker. Gap19 TFA inhibits hemichannels caused by preventing intramolecular interactions of the C-terminus (CT) with the CL.

95.11%

Clinical Data: No Development Reported 1 mg, 5 mg, 10 mg

#### Larazotide acetate

Cat. No.: HY-106268A

Larazotide acetate is a synthetic peptide. Larazotide acetate acts as a tight junction regulator and reverses leaky junctions to their normally closed state.

HAN THE PART OF TH

Purity: 99.68% Clinical Data: Phase 3

Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 25 mg

# Meclofenamic acid

(Meclofenamate)

Meclofenamic Acid (Meclofenamate), a non-steroidal, anti-inflammatory agent, is a highly selective **fat mass and obesity-associated** (**FTO**) **enzyme** inhibitor. Meclofenamic Acid competes with FTO binding for the m(6)A-containing nucleic acid.

Purity: >98%
Clinical Data: Launched
Size: 1 mg, 5 mg

# CI NH OO OL

Cat. No.: HY-117275

# Meclofenamic acid sodium

(Meclofenamate sodium) Cat. No.: HY-B1320

Meclofenamic acid (Meclofenamate) sodium is a nonsteroidal anti-inflammatory drug (NSAID) approved for use in arthritis (osteo and rheumatoid), analgesia (mild to moderate pain), dysmenorrhea, and heavy menstrual blood loss (menorrhagia).

rate pain),
Olood loss
CI

Purity: 99.86% Clinical Data: Launched

Size: 10 mM × 1 mL, 50 mg, 100 mg, 200 mg

# Meclofenamic acid-d4

(Meclofenamate-d4) Cat. No.: HY-117275S

Meclofenamic acid-d4 (Meclofenamate-d4) is the deuterium labeled Meclofenamic acid. Meclofenamic Acid (Meclofenamate), a non-steroidal, anti-inflammatory agent, is a highly selective fat mass and obesity-associated (FTO) enzyme inhibitor.

**Purity:** >98%

Clinical Data: No Development Reported

Size: 1 mg, 10 mg



#### Peptide5

Cat. No.: HY-P2275

Peptide5, a connexin 43 mimetic peptide, reduce animals swelling, astrogliosis, and neuronal cell death after spinal cord injury.

**Purity:** >98%

Clinical Data: No Development Reported

Size: 1 mg, 5 mg

# Rotigaptide (ZP123)

(ZP123) Cat. No.: HY-106225

Rotigaptide (ZP123) is a novel and specific modulator of **connexin 43** (Cx43). Rotigaptide prevents the uncoupling of Cx43-mediated **gap junction** communication and normalizes cell-to-cell communication during acute metabolic stress.



**Purity:** 99.63%

Clinical Data: No Development Reported Size: 10 mM × 1 mL, 1 mg, 5 mg

## TAT-Gap19

Cat. No.: HY-P1136B

TAT-Gap19, a Cx mimetic peptide, is a specific connexin43 hemichannel (Cx43 HC) inhibitor.
TAT-Gap19 does not inhibits the corresponding Cx43 GJCs. TAT-Gap19 traverses the blood-brain barrier and alleviate liver fibrosis in mice.

YGRKKRRQRRRKQIEIKKFK

**Purity:** >98%

Clinical Data: No Development Reported

Size: 1 mg, 5 mg

# TAT-Gap19 TFA

Cat. No.: HY-P1136C

TAT-Gap19 TFA, a Cx mimetic peptide, is a specific connexin43 hemichannel (Cx43 HC) inhibitor. TAT-Gap19 TFA does not inhibits the corresponding Cx43 GJCs. TAT-Gap19 TFA traverses the blood-brain barrier and alleviate liver fibrosis in mice.

YGRKKRRQRRRKQIEIKKFK (TFA salt)

Purity: 98.36%

Clinical Data: No Development Reported

Size: 5 mg, 10 mg

#### **Tonabersat**

(SB-220453)

Cat. No.: HY-15204

Tonabersat (SB-220453) is a **gap-junction** modulator. Tonabersat prevents inflammatory damage in the central nervous system.

O HN O

Purity: 98.36% Clinical Data: Phase 2

Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg