NKCC

Na-K-Cl cotransporter; Na(+)-K(+)-Cl(-) cotransporter; Na+-K+-Cl− cotransporter

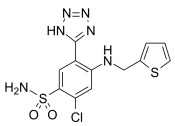
NKCC (Na-K-Cl cotransporter) is a protein that aids in the active transport of sodium, potassium, and chloride into and out of cells. There are two varieties of this membrane transport protein, NKCC1 and NKCC2, however these are encoded by two different genes (SLC12A2 and SLC12A1 respectively) and are not isoforms. Two isoforms of the NKCC1/Slc12a2 gene result from keeping (isoform 1) or skipping (isoform 2) exon 21 in the final gene product. NKCC1 is widely distributed throughout the body; it has important functions in organs that secrete fluids. NKCC2 is found specifically in the kidney, where it serves to extract sodium, potassium, and chloride from the urine so that they can be reabsorbed into the blood. NKCC proteins are membrane transport proteins that transport sodium (Na), potassium (K), and chloride (Cl) ions across the cell membrane. Because they move each solute in the same direction, NKCC proteins are considered symporters.

NKCC Inhibitors

Azosemide

Cat. No.: HY-107321

Azosemide, a sulfonamide loop diuretic, is a potent **NKCC1** inhibitor with IC_{50}s of 0.246μM and 0.197μM for hNKCC1A and NKCC1B, respectively.



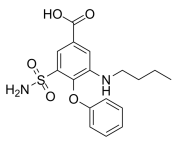
Purity: 99.75%
Clinical Data: Phase 4
Size: 10 mM × 1 mL, 10 mg, 25 mg

Bumetanide

(Ro 10-6338; PF 1593)

Cat. No.: HY-17468

Bumetanide (Ro 10-6338; PF 1593), a highly potent loop diuretic, is a **Na^+-K^+-Cl^+ cotransporter (NKCC)** blocker. Bumetanide is a selective **NKCC1** inhibitor, but also inhibits NKCC2, with IC_{50}s of 0.68 μM and 4.0 μM for hNKCC1A and hNKCC2A, respectively.

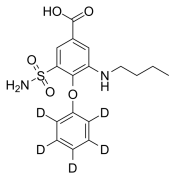


Purity: 99.91%
Clinical Data: Launched
Size: 10 mM × 1 mL, 500 mg, 1 g, 5 g

Bumetanide-d5

Cat. No.: HY-17468S

Bumetanide D5 is a deuterium labeled Bumetanide. Bumetanide is a selective Na^+-K^+-Cl^- (**NKCC1**) inhibitor, weakly inhibits NKCC2, with IC_{50}s of 0.68 and 4.0 μM for hNKCC1A and hNKCC2A, respectively.

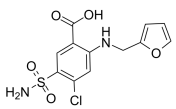


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Furosemide

Cat. No.: HY-B0135

Furosemide is a potent and orally active inhibitor of **Na^+/K^+/2Cl^- (NKCC) cotransporter**, NKCC1 and NKCC2.

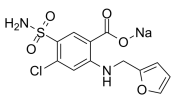


Purity: 99.52%
Clinical Data: Launched
Size: 10 mM × 1 mL, 500 mg, 1 g, 5 g

Furosemide sodium

Cat. No.: HY-B0135A

Furosemide sodium is a potent and orally active inhibitor of **Na^+/K^+/2Cl^- (NKCC) cotransporter**, NKCC1 and NKCC2.

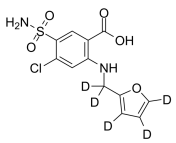


Purity: 99.72%
Clinical Data: Launched
Size: 10 mM × 1 mL, 500 mg, 1 g

Furosemide-d5

Cat. No.: HY-B0135S

Furosemide-d5 is the deuterium labeled Furosemide. Furosemide is a potent and orally active inhibitor of **Na^+/K^+/2Cl^- (NKCC) cotransporter**, NKCC1 and NKCC2.

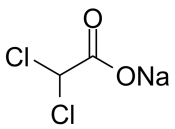


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 10 mg

Sodium dichloroacetate

Cat. No.: HY-Y0445A

Sodium dichloroacetate is a metabolic regulator in cancer cells' mitochondria with anticancer activity. Sodium dichloroacetate inhibits **PDHK**, resulting in decreased lactic acid in the tumor microenvironment.



Purity: ≥98.0%
Clinical Data: Phase 3
Size: 100 mg

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