Mixed Lineage Kinase

MLKs

Mixed lineage kinases (MLKs) are mitogen activated protein kinase kinase kinases (MAPKKKs) with features of both serine-threonine and tyrosine kinases that regulate the c-Jun N-terminal kinase (JNK) mitogen activated protein kinase (MAPK) signaling cascade, and also regulate p38 and extracellular signal-regulated kinase (ERK).

MLK3 (MAP3K11) is the most widely expressed MLK family member, and is expressed in neurons (as well as other cell types). At the cellular level, MLK3 is activated by stress, including reactive oxygen species, ceramide, and TNFα. At the molecular level, it is activated by Cdc42 and Rac, which interact with MLK3, and can cause it to dimerize via a leucine zipper interface, resulting in autophosphorylation and enzyme activation.
### Mixed Lineage Kinase Inhibitors

#### (E)-Necrosulfonamide

**Cat. No.:** HY-100573

(E)-Necrosulfonamide is a necroptosis inhibitor acting by selectively targeting the mixed lineage kinase domain-like protein (MLKL) to block the necrosome formation.

- **Purity:** 99.23%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

#### GW806742X

**Cat. No.:** HY-112292

GW806742X is a Mixed Lineage Kinase Domain-Like protein (MLKL) inhibitor which binds the MLKL pseudokinase domain with a $K_d$ value of 9.3 μM and has anti-necroptosis activity. GW806742X has activity against VEGFR2.

- **Purity:** 98.09%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

#### TC13172

**Cat. No.:** HY-101524

TC13172 is a mixed lineage kinase domain-like protein (MLKL) inhibitor with an $EC_{50}$ value of 2 nM for HT-29 cells.

- **Purity:** 99.04%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

#### URMC-099

**Cat. No.:** HY-12599

URMC-099 is an orally bioavailable and potent mixed lineage kinase type 3 (MLK3) ($IC_{50}$=14 nM) inhibitor with with excellent blood-brain barrier penetration properties.

- **Purity:** 99.90%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg