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Inhibitors, Screening Libraries, Proteins

# MAP4K

## MAPK Kinase Kinase Kinase

MAP kinase kinase kinase kinases (MAP4Ks) belong to the mammalian Ste20-like family of serine/threonine kinases. MAP4Ks including MAP4K1/HPK1, MAP4K2/GCK, MAP4K3/GLK, MAP4K4/HGK, MAP4K5/KHS, and MAP4K6/MINK have been reported to induce JNK activation through activating the MAP3K-MAP2K cascade. MAP4Ks play important roles in the regulation of cell apoptosis, cell survival, cell autophagy, and cell migration. Several studies reported that MAP4Ks are involved in the regulation of immune-cell responses through JNK-independent pathways.

MAP4K1/HPK1 and MAP4K4/HGK play negative roles in T-cell activation and inflammatory responses. In contrast, MAP4K3/GLK plays a positive role in T-cell activation and autoimmune responses. Moreover, MAP4K1 downregulation and MAP4K3 overexpression in T cells are involved in human autoimmune diseases such as psoriatic arthritis, rheumatoid arthritis (RA), adult-onset Still's disease, and SLE.

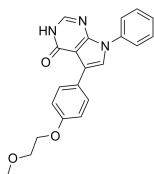
## MAP4K Inhibitors

### DMX-5804

Cat. No.: HY-111754

DMX-5804 is a potent, orally active and selective MAP4K4 inhibitor, with an  $IC_{50}$  of 3 nM, a  $pIC_{50}$  of 8.55 for human MAP4K4, less potent on MINK1/MAP4K6 ( $pIC_{50}$ , 8.18), and TNIK/MAP4K7 ( $pIC_{50}$ , 7.96).

**Purity:** 99.63%  
**Clinical Data:** No Development Reported  
**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

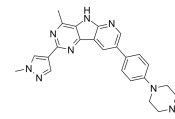


### GENE 220

Cat. No.: HY-U00428

GENE-220 is a potent and selective inhibitor of MAP4K4 with an  $IC_{50}$  of 7 nM.

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

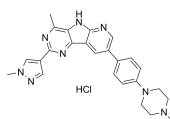


### GENE 220 hydrochloride

Cat. No.: HY-U00428A

GENE 220 (hydrochloride) is a potent and selective inhibitor of MAP4K4, with an  $IC_{50}$  of 7 nM.

**Purity:** 98.33%  
**Clinical Data:** No Development Reported  
**Size:** 5 mg, 10 mg, 25 mg

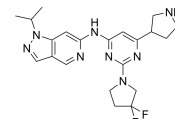


### GENE-1858

Cat. No.: HY-135892

GENE-1858 is a potent and ATP-competitive hematopoietic progenitor kinase-1 (HPK1) inhibitor, with  $IC_{50}$ s of 1.9 nM, 1.9 nM, and 4.5 nM for wild-type and the active mimetic mutants HPK1-TSEE and HPK1-SA, respectively.

**Purity:** 99.0%  
**Clinical Data:** No Development Reported  
**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

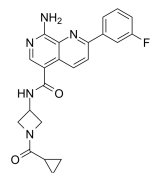


### GENE-495

Cat. No.: HY-100343

GENE-495 is a potent and selective MAP4K4 inhibitor with an  $IC_{50}$  of 3.7 nM.

**Purity:** 99.68%  
**Clinical Data:** No Development Reported  
**Size:** 1 mg, 5 mg, 10 mg, 50 mg, 100 mg

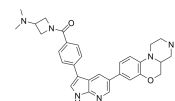


### HPK1-IN-10

Cat. No.: HY-145036

HPK1-IN-10 is potent inhibitor of HPK1. HPK1 is a serine/threonine protein kinase cloned from hematopoietic progenitor cells and belongs to the MAP4K family of mammalian Ste-20-related protein kinases.

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

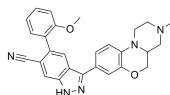


### HPK1-IN-11

Cat. No.: HY-145037

HPK1-IN-11 is potent inhibitor of HPK1. HPK1 is a serine/threonine protein kinase cloned from hematopoietic progenitor cells and belongs to the MAP4K family of mammalian Ste-20-related protein kinases.

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

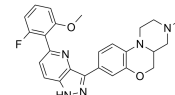


### HPK1-IN-12

Cat. No.: HY-145038

HPK1-IN-12 is potent inhibitor of HPK1. HPK1 is a serine/threonine protein kinase cloned from hematopoietic progenitor cells and belongs to the MAP4K family of mammalian Ste-20-related protein kinases.

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

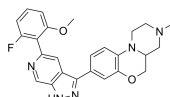


### HPK1-IN-13

Cat. No.: HY-145039

HPK1-IN-13 is potent inhibitor of HPK1. HPK1 is a serine/threonine protein kinase cloned from hematopoietic progenitor cells and belongs to the MAP4K family of mammalian Ste-20-related protein kinases.

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

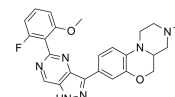


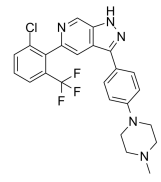
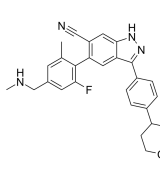
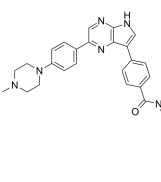
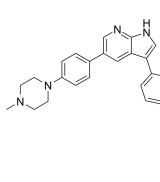
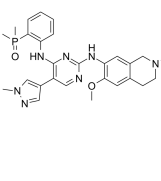
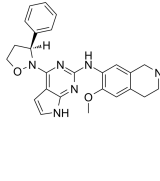
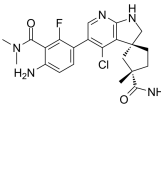
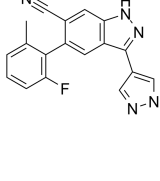
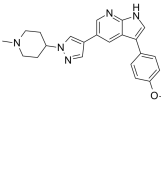
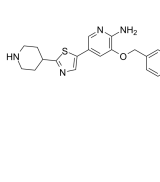
### HPK1-IN-14

Cat. No.: HY-145040

HPK1-IN-14 is potent inhibitor of HPK1. HPK1 is a serine/threonine protein kinase cloned from hematopoietic progenitor cells and belongs to the MAP4K family of mammalian Ste-20-related protein kinases.

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

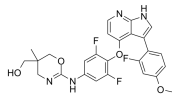


<p><b>HPK1-IN-15</b></p> <p><b>Cat. No.:</b> HY-145041</p> <p>HPK1-IN-15 is a potent and selective inhibitor of <b>HPK1</b>. Hematopoietic progenitor kinase 1 (HPK1) originally cloned from hematopoietic progenitor cells is a member of MAP kinase kinase kinases (MAP4Ks) family.</p> <p><b>Purity:</b> &gt;98%  <b>Clinical Data:</b> No Development Reported  <b>Size:</b> 1 mg, 5 mg</p> 	<p><b>HPK1-IN-16</b></p> <p><b>Cat. No.:</b> HY-145042</p> <p>HPK1-IN-16 is a potent and selective inhibitor of <b>HPK1</b>. Hematopoietic progenitor kinase 1 (HPK1) originally cloned from hematopoietic progenitor cells is a member of MAP kinase kinase kinases (MAP4Ks) family.</p> <p><b>Purity:</b> &gt;98%  <b>Clinical Data:</b> No Development Reported  <b>Size:</b> 1 mg, 5 mg</p> 
<p><b>HPK1-IN-17</b></p> <p><b>Cat. No.:</b> HY-145044</p> <p>HPK1-IN-17 is a potent and selective inhibitor of <b>HPK1</b>. Hematopoietic progenitor kinase 1 (HPK1) originally cloned from hematopoietic progenitor cells is a member of MAP kinase kinase kinases (MAP4Ks) family.</p> <p><b>Purity:</b> &gt;98%  <b>Clinical Data:</b> No Development Reported  <b>Size:</b> 1 mg, 5 mg</p> 	<p><b>HPK1-IN-18</b></p> <p><b>Cat. No.:</b> HY-145045</p> <p>HPK1-IN-18 is a potent and selective inhibitor of <b>HPK1</b>. Hematopoietic progenitor kinase 1 (HPK1) originally cloned from hematopoietic progenitor cells is a member of MAP kinase kinase kinases (MAP4Ks) family.</p> <p><b>Purity:</b> &gt;98%  <b>Clinical Data:</b> No Development Reported  <b>Size:</b> 1 mg, 5 mg</p> 
<p><b>HPK1-IN-19</b></p> <p><b>Cat. No.:</b> HY-145107</p> <p>HPK1-IN-19 is a <b>hematopoietic progenitor kinase 1 (HPK1)</b> inhibitor extracted from patent WO2018102366A1 compound I-47.</p> <p><b>Purity:</b> &gt;98%  <b>Clinical Data:</b> No Development Reported  <b>Size:</b> 1 mg, 5 mg</p> 	<p><b>HPK1-IN-20</b></p> <p><b>Cat. No.:</b> HY-145109</p> <p>HPK1-IN-19 is a <b>hematopoietic progenitor kinase 1 (HPK1)</b> inhibitor extracted from patent WO2020235902A1 compound 106.</p> <p><b>Purity:</b> &gt;98%  <b>Clinical Data:</b> No Development Reported  <b>Size:</b> 1 mg, 5 mg</p> 
<p><b>HPK1-IN-21</b></p> <p><b>Cat. No.:</b> HY-144073</p> <p>HPK1-IN-21 is a potent inhibitor of <b>HPK1</b> kinase (K<sub>i</sub>=0.8 nM), HPK1-IN-21 also has orally active.</p> <p><b>Purity:</b> &gt;98%  <b>Clinical Data:</b> No Development Reported  <b>Size:</b> 1 mg, 5 mg</p> 	<p><b>HPK1-IN-24</b></p> <p><b>Cat. No.:</b> HY-144091</p> <p>HPK1-IN-24 (example 51) is a <b>hematopoietic progenitor kinase 1 (HPK1)</b> inhibitor with a K<sub>i</sub> of 100 nM. HPK1-IN-24 has the potential for cancer research.</p> <p><b>Purity:</b> &gt;98%  <b>Clinical Data:</b> No Development Reported  <b>Size:</b> 1 mg, 5 mg</p> 
<p><b>HPK1-IN-25</b></p> <p><b>Cat. No.:</b> HY-144092</p> <p>HPK1-IN-25 (example 94) is a <b>hematopoietic progenitor kinase 1 (HPK1)</b> inhibitor with an enzymatic activity IC<sub>50</sub> of 129 nM. HPK1-IN-25 has the potential for cancer research.</p> <p><b>Purity:</b> &gt;98%  <b>Clinical Data:</b> No Development Reported  <b>Size:</b> 1 mg, 5 mg</p> 	<p><b>HPK1-IN-26</b></p> <p><b>Cat. No.:</b> HY-144093</p> <p>HPK1-IN-26 is a <b>HPK1</b> and <b>GLK</b> inhibitor extracted from patent WO2021254118A1 compound 1. HPK1-IN-26 can be used for the research of animal pathogen infection.</p> <p><b>Purity:</b> &gt;98%  <b>Clinical Data:</b> No Development Reported  <b>Size:</b> 1 mg, 5 mg</p> 

### HPK1-IN-27

Cat. No.: HY-143868

HPK1-IN-27 is a potent inhibitor of HPK1. MAP4K1 is also known as hematopoietic progenitor kinase 1 (HPK1). MAP4K1 is a serine/threonine kinase and member of the germinal center kinase family.

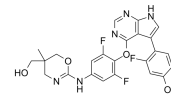


**Purity:** >98%  
**Clinical Data:** No Development Reported  
**Size:** 1 mg, 5 mg

### HPK1-IN-28

Cat. No.: HY-143869

HPK1-IN-28 is a potent inhibitor of HPK1. Hematopoietic progenitor kinase 1 (HPK1) is a negative regulator of the activation response of dendritic cells (DCs), T cells and B cells. HPK1-IN-28 enhances the body's anti-tumor immunity.

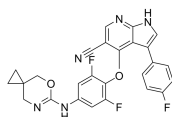


**Purity:** >98%  
**Clinical Data:** No Development Reported  
**Size:** 1 mg, 5 mg

### HPK1-IN-29

Cat. No.: HY-143870

HPK1-IN-29 is a potent inhibitor of HPK1. Hematopoietic progenitor kinase 1 (HPK1) is a negative regulator of the activation response of dendritic cells (DCs), T cells and B cells. HPK1-IN-29 enhances the body's anti-tumor immunity.

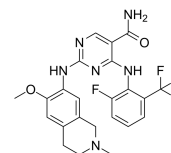


**Purity:** >98%  
**Clinical Data:** No Development Reported  
**Size:** 1 mg, 5 mg

### HPK1-IN-3

Cat. No.: HY-138568

HPK1-IN-3 is a potent and selective ATP-competitive hematopoietic progenitor kinase 1 (HPK1; MAP4K1) inhibitor with an  $IC_{50}$  of 0.25 nM. HPK1-IN-3 has IL-2 cellular potency with an  $EC_{50}$  of 108 nM in human peripheral blood mononuclear cells (PBMCs).

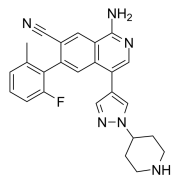


**Purity:** 98.53%  
**Clinical Data:** No Development Reported  
**Size:** 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

### HPK1-IN-30

Cat. No.: HY-143871

HPK1-IN-30 is a potent inhibitor of HPK1. MAP4K1 is also known as hematopoietic progenitor kinase 1 (HPK1). MAP4K1 is a serine/threonine kinase and member of the germinal center kinase family.

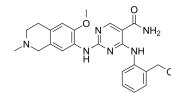


**Purity:** >98%  
**Clinical Data:** No Development Reported  
**Size:** 1 mg, 5 mg

### HPK1-IN-4

Cat. No.: HY-138569

HPK1-IN-4 (comp 22) is a HPK1 (MAP4K1) inhibitor ( $IC_{50}$  of 0.061 nM) as preclinical immunotherapy tool compound.

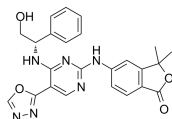


**Purity:** 99.09%  
**Clinical Data:** No Development Reported  
**Size:** 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

### HPK1-IN-7

Cat. No.: HY-138742

HPK1-IN-7 is a potent, orally active HPK1 (hematopoietic progenitor kinase 1, MAP4K1) inhibitor ( $IC_{50}$ =2.6 nM) with excellent family and kinase selectivity. HPK1-IN-7 shows selectivity against IRAK4 (59 nM) and GLK (140 nM).

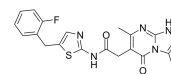


**Purity:** 99.61%  
**Clinical Data:** No Development Reported  
**Size:** 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

### HPK1-IN-8

Cat. No.: HY-132926

HPK1-IN-8 is an allosteric, inactive conformation-selective inhibitor of full-length HPK1.

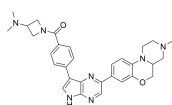


**Purity:** >98%  
**Clinical Data:** No Development Reported  
**Size:** 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

### HPK1-IN-9

Cat. No.: HY-145035

HPK1-IN-9 is potent inhibitor of HPK1. HPK1 is a serine/threonine protein kinase cloned from hematopoietic progenitor cells and belongs to the MAP4K family of mammalian Ste-20-related protein kinases.

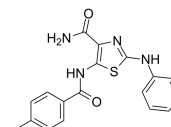


**Purity:** >98%  
**Clinical Data:** No Development Reported  
**Size:** 1 mg, 5 mg

### KY-05009

Cat. No.: HY-124745

KY-05009 is an ATP-competitive Traf2- and Nck-interacting kinase (TNIK) inhibitor with a  $K_i$  of 100 nM. KY-05009 pharmacologically inhibits TGF- $\beta$ 1-induced epithelial-to-mesenchymal transition (EMT) in human lung adenocarcinoma cells.

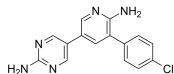


**Purity:** 99.80%  
**Clinical Data:** No Development Reported  
**Size:** 10 mM  $\times$  1 mL, 5 mg, 25 mg, 100 mg

### MAP4K4-IN-3

Cat. No.: HY-125012

MAP4K4-IN-3 (Compound 17) is a potent and selective MAP4K4 inhibitor with an  $IC_{50}$  of 14.9 nM in kinase assay, an  $IC_{50}$  of 470 nM in cell assay. Antidiabetic agent.

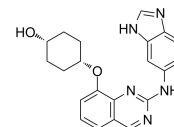


**Purity:** 99.13%  
**Clinical Data:** No Development Reported  
**Size:** 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

### NCB-0846

Cat. No.: HY-100830

NCB-0846 is an orally available TNIK inhibitor with an  $IC_{50}$  of 21nM.

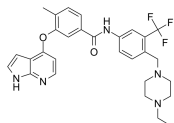


**Purity:** 99.36%  
**Clinical Data:** No Development Reported  
**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

### NG25

Cat. No.: HY-15434

NG25 is a potent dual TAK1 and MAP4K2 inhibitor, with  $IC_{50}$ s of 149 nM and 21.7 nM, respectively.

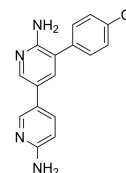


**Purity:** 99.35%  
**Clinical Data:** No Development Reported  
**Size:** 10 mM × 1 mL, 1 mg, 5 mg, 10 mg

### PF-06260933

Cat. No.: HY-19562

PF-06260933 is an orally active and highly selective inhibitor of MAP4K4 with  $IC_{50}$ s of 3.7 and 160 nM for kinase and cell, respectively.

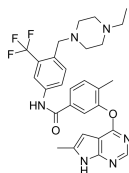


**Purity:** 98.41%  
**Clinical Data:** No Development Reported  
**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

### TAK1/MAP4K2 inhibitor 1

Cat. No.: HY-77251

TAK1/MAP4K2 inhibitor 1 is a potent dual TGF $\beta$ -activated kinase 1 (TAK1) and mitogen-activated protein kinase kinase kinase 2 (MAP4K2) inhibitor, with  $IC_{50}$ s of 41.1 nM and 18.2 nM, respectively.



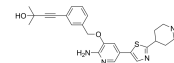
**Purity:** 99.70%  
**Clinical Data:** No Development Reported  
**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

### ZYF0033

(HPK1-IN-22)

Cat. No.: HY-144088

HPK1-IN-22 (compound ZYF0033) is a hematopoietic progenitor kinase 1 (HPK1) inhibitor with an  $IC_{50}$  less than 10 nM based on the phosphorylation inhibition of MBP protein. HPK1-IN-22 decreases the phosphorylation of SLP76 (serine 376).



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