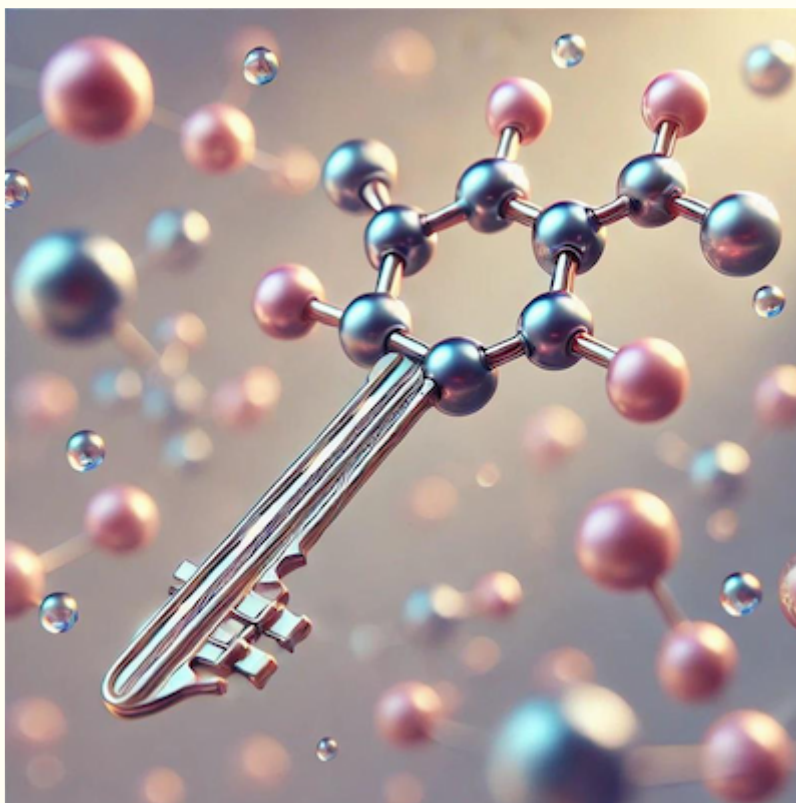




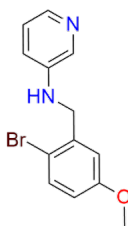
Chemical probes are specific small molecules used in biological research to investigate the function and behavior of biomolecules within cells or organisms. These probes are designed to interact with their target molecules in a highly selective and often reversible manner, enabling researchers to modulate the activity of the target and study its biological effects. It is a gateway to understanding fundamental biological processes, aiding in developing first-in-class drugs.

Library of High-Potency Chemical Probes is a collection of 413 compounds designed to advance the field of drug discovery and biological research. This library stands out for the stringent selection criteria, focusing on compounds with exceptional potency ($pX \geq 7$) and selectivity (≥ 1.5 pX), ensuring the highest level of precision in modulating biological targets. This precision makes them invaluable for complementing traditional target validation methods and disease pathology.

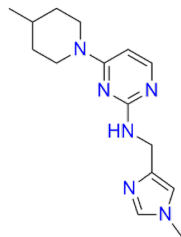
Related terms: *chemical probes, DVL1, Estrogen receptor, Cav2.1, 5-HT2A receptor, GABAA receptor, V2 receptor, Ferroportin, H3 receptor.*



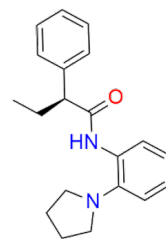
Highlights



EBC-373081
UCSF4226 is a high affinity brain-penetrant inverse agonist of melatonin receptor MTNR1B (MT2)



EBC-229024
TP-040 is an inhibitor of OGA with an IC50 value of 46 nM.



EBC-46196
ML252 is a selective inhibitor of potassium channel, targeting to KCNQ2 channel (Kv7.2) (IC50 =69 nM).

Library Composition

Name	Occurrence in the library, times
G protein-coupled receptors	25
Receptor tyrosine kinases (RTKs)	15
Non-receptor tyrosine kinases (nRTKs)	7
Nuclear hormone receptors	7
MA: Metallo (M) Peptidases	5
Voltage-gated ion channels	4
Ligand-gated ion channels	4
Steroid hormone receptors	4
Cyclin-dependent kinase (CDK) family	4
Catalytic receptors	3
Orphan and other 7TM receptors	3
Eicosanoid turnover	3
Tubulins	2

SLC superfamily of solute carriers	2
ATP-binding cassette transporter family	2
Glycerophospholipid turnover	2
CMGC: Containing CDK, MAPK, GSK3, CLK families	2
Lipid modifying kinases	2
Pattern recognition receptors	2
SLC22 family of organic cation and anion transporters	2
AA: Aspartic (A) Peptidases	2
Cytochrome P450	2
Oxidoreductases	2
Ceramide turnover	2
Dual-specificity tyrosine-(Y)-phosphorylation regulated kinase (DYRK) family	1
Catecholamine turnover	1
Poly ADP-ribose polymerases	1
DNA topoisomerases	1
MC: Metallo (M) Peptidases	1
Chromatin modifying enzymes	1
Mitogen-activated protein kinases (MAP kinases)	1
Aryl hydrocarbon receptor complex	1
RSK family	1

Polo-like kinase (PLK) family	-	1
SC: Serine (S) Peptidases	-	1
Carrier proteins	-	1
Glutaminases	-	1
CAMK: Calcium/calmodulin-dependent protein kinases	-	1
Chloride channels	-	1
Cytokine receptor family	-	1
Glycogen synthase kinase (GSK) family	-	1
Sigma receptors	-	1
Viral protein targets	-	1
IKK family	-	1
DMPK family	-	1
Amino acid hydroxylases	-	1
Endocannabinoid turnover	-	1
MH: Metallo (M) Peptidases	-	1
CAMKK family	-	1
Acetylcholine turnover	-	1
Adenosine turnover	-	1
MG: Metallo (M) Peptidases	-	1
CA: Cysteine (C) Peptidases	-	1

B-cell lymphoma 2 (Bcl-2) protein family	-	1
Potassium channels	-	1
Inhibitors of apoptosis (IAP) protein family	-	1
PA: Serine (S) Peptidases	-	1
Membrane bound O-acyltransferases	-	1
AGC: Containing PKA, PKG, PKC families	-	1
Adiponectin receptors	-	1
Aurora kinase (Aur) family	-	1
Interleukin-1 receptor-associated kinase (IRAK) family	-	1
Immunoglobulin like domain containing proteins	-	1
SLC6 neurotransmitter transporter family	-	1
TKL-unique family	-	1