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Chemicals

Chemical Probes

Potent and selective modulators of protein functions accelerating drug discovery

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De-risk your drug discovery projects with our new range of Chemical Probes

Our chemical probes are selective small-molecule modulators of a protein's function allowing the user to ask mechanistic and phenotypic questions about their molecular target in cell-based or animal studies.

Chemical probes represent an important component of both academic and pharmaceutical drug discovery research reducing the technical or biological risks of pursuing the wrong pathway or target before commencing clinical trials. Chemical probes are essential in the validation of new molecular targets for a therapeutic indication.

The table below provides the clear differences between small-molecule drugs and chemical probes.



DRUGS

Must be safe and effective

May have undefined MoA

IP restrictions; limited availability

Must have human bioavailability

High bar for physicochemical (guidelines for MW, lipophilicity, etc.) and pharmaceutical properties (stability, reasonable and economic synthesis, defined crystallization form etc.)

Article reference:
<https://www.nature.com/articles/nchembio.1867>

PROBES

Ask a specific biological question

Defined MoA required

Needs selectivity

Freely available (both the physical compound itself and activity data)

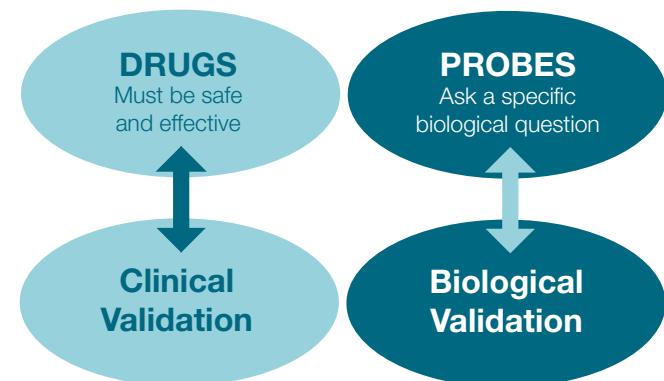
Drug-like properties, such as bioavailability, not necessarily required

Value is markedly enhanced by use of structurally related inactive and structurally unrelated active compounds

Figure 1: Comparison of small molecule drugs and chemical probes

Chemical probes can be used to help establish the relationship between a molecular target and the broader biological consequences of modulating that target in cells or organisms. Thus, they can be used to discover new biology relating to that target, to clarify the relationship between the target and a phenotype, and to validate that a particular target is a suitable intervention point to impact the progression or outcome of a disease.

They offer a biological validation rather than a clinical validation of the target.



Protein Kinase

IBS No.	Chemical Name	Protein Target Name	CAS No.	Pack Size
17130646	Alectinib	ALK	1256580-46-7	100 mg
17150636	AZ191	DYRK1B	1594092-37-1	100 mg
17171126	Bafetinib	BCR-ABL, LYN	859212-16-1	100 mg
17140646	Barasertib	AURKB	722544-51-6	100 mg
17160636	BI-2536	PLK1, PLK2, PLK3	755038-02-9	100 mg
17181126	BIX-02188	MAP2K5	334949-59-6	100 mg
17121136	BLU9931	FGFR4	1538604-68-0	100 mg
17130656	CGI1746	BTK	910232-84-7	100 mg
17170646	CHIR-99021	GSK3A, GSK3B	252917-06-9	100 mg
17190646	Filotinib	JAK1	1206161-97-8	100 mg
17190636	GNE7915	LRRK2	1351761-44-8	100 mg
17100656	GNF-5	BCR-ABL	778277-15-9	100 mg
17161136	GSK481	RIPK1	1622849-58-4	100 mg
17171136	GSK583	RIPK2	1346547-00-9	100 mg
17150646	Infigratinib	FGFR1, FGFR2, FGFR3, FGFR4	872511-34-7	100 mg
17181136	P505-15	SYK	1370261-96-3	100 mg
17140656	SCH772984	MAPK1, MAPK3	942183-80-4	100 mg
17111136	Spebrutinib	BTK	1202757-89-8	100 mg
17140636	UNC2025	MERTK, FLT3	1429881-91-3	100 mg
17131126	VE-821	ATR	1232410-49-9	100 mg

Epigenetics

IBS No.	Chemical Name	Protein Target Name	CAS No.	Pack Size
17120646	A-366	EHMT2, EHMT1	1527503-11-2	100 mg
17151126	ACY-738	HDAC6	1375465-91-0	100 mg
17181116	BIX-01294	EHMT2	935693-62-2	100 mg
17131136	EED226	EED	2083627-02-3	100 mg
17180646	EI1	EZH2	1418308-27-6	100 mg
17100646	GSK2801	BAZ2A, BAZ2B	1619994-68-1	100 mg
17110646	GSK-5959	BRPF1	901245-65-6	100 mg
17101136	GSK-J4 hydrochloride	KDM6A, KDM6B	1797983-09-5	100 mg
17191116	I-BET151	BRD2, BRD3, BRD4	1300031-49-5	100 mg
17141136	Pinometostat	DOT1L	1380288-87-8	100 mg
17151136	Tazemetostat	EZH2	1403254-99-8	100 mg
17110656	UNC1999	EZH1, EZH2	1431612-23-5	100 mg

Hormone pathway

IBS No.	Chemical Name	Protein Target Name	CAS No.	Pack Size
17180636	GW3965 hydrochloride	LXR-alpha, LXR-beta	405911-17-3	100 mg
17121126	T0901317	LXR-alpha, LXR-beta	293754-55-9	100 mg

Lipid kinase

IBS No.	Chemical Name	Protein Target Name	CAS No.	Pack Size
17160646	Alpelisib	PIK3CA	1217486-61-7	100 mg
17111126	Pictilisib	PIK3CA, PIK3CD	957054-30-7	100 mg

Other

IBS No.	Chemical Name	Protein Target Name	CAS No.	Pack Size
17141126	A-1210477	MCL1	1668553-26-1	100 mg
17161126	AGI-5198	IDH1 R132H	1355326-35-0	100 mg
17171116	AGI-6780	IDH2 R140Q	1432660-47-3	100 mg
17101126	JW55	TNKS, TNKS2	664993-53-7	100 mg
17120656	Venetoclax	BCL2	1257044-40-8	100 mg



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