



GeneChip miRNA Array

Affymetrix Genechip® miRNA基因芯片完美解决方案

Affymetrix Genechip® miRNA基因芯片是研究miRNA的强大工具，它包括miRNA芯片、试剂以及软件。Affymetrix Genechip® miRNA基因芯片是研究microRNA功能及其基因调控重要性的重要手段。Affymetrix Genechip® miRNA基因芯片包含了来自Sanger miRNA V11 数据库的miRNA，以及能起到核糖体RNA转录后加工作用的非编码短片人类细胞核RNA (snoRNA和scaRNAs)。而芯片所检测的snoRNA还与转录本选择性剪接的调控相关。

主要特点：

- 业界覆盖度最高的miRNA芯片
 - 针对Sanger miRNA V11数据库设计
 - 一张芯片覆盖了71个物种
 - 人类、小鼠、大鼠、玉米、小麦、水稻、高粱、甘蔗等，几乎包括了所有重要的研究对象和药物开发模式生物
 - 市场上唯一一款包含了人类细胞核小RNA的芯片 (snoRNAs和scaRNAs)
- 业界最为可靠的芯片平台
 - Affymetrix公司的miRNA芯片采用专利性的光刻技术合成，确保了高重复性 (CVs≤10%)
 - 整个流程加入了多重质控，确保实验成功
 - 杂交对照
 - 看家基因对照
 - 参入对照
 - 背景对照
- 与Affymetrix公司7G和TG系统兼容

软件：miRNA QC Tool

- Affymetrix公司网站上免费下载
- 完成芯片质控、数据均一化和整合
- 提供多种均一化方法
- 可与第三方软件无缝对接

表现度：

应用Genisphere公司的标记试剂盒(www.genisphere.com, 目录号 FT10AFYB – 10个反应, FT30AFYB – 30个反应)所完成的miRNA实验具有特异性、敏感性和重复性的

- 重复性：CVs≤10%
- 敏感性：≤10 attomoles
- 动态范围：4 log₁₀
- 特异性：可以区分miRNA间一个碱基的差别
- 总RNA起始量：最少100ng



Affymetrix Genechip® miRNA 基因芯片覆盖的物种

Common Name	Latin Name	中文名称	Common Name	Latin Name	中文名称
Human	Homo sapiens	人	Mouse cytomegalovirus	Mouse cytomegalovirus	小鼠巨细胞病毒
Mosquito	Anopheles gambiae	蚊子	Opossum	Monodelphis domestica	灰色短尾负鼠
Spider Monkey	Ateles geoffroyi	蜘蛛猴	herpes virus in chicken	Mareks disease	鸡疱疹病毒
honeybee	Apis mellifera	蜜蜂	Murine gammaherpes virus	Mouse gammaherpesvirus	鼠疱疹病毒
Arabidopsis	Arabidopsis thaliana	拟南芥	Rhesus Macaque	Macaca mulatta	恒河猴
silkworm moth	Bombyx mori	蚕	Mouse	Mus musculus	小鼠
Eurasian plant	Brassica napus	甘蓝型油菜	southern pigtail macaque	Macaca nemestrina	豚尾猴
Brassica	Brassica oleracea	羽衣甘蓝	Barrel Medic or Barrel Medick or Barrel Clover	Medicago truncatula	蒺藜苜蓿
Brassica	Brassica rapa	芸苔	domestic sheep	Ovis aries	羊
cattle	Bos taurus	牛	small pelagic chordate (marine animal)	Oikopleura dioica	异体住囊虫
nematode	Caenorhabditis briggsae	秀丽隐杆线虫	rice	Oryza sativa	水稻
nematode	Caenorhabditis elegans	秀丽小杆线虫	Black snub-nosed monkey	Pygathrix bieti	滇金丝猴
dog	Canis familiaris	狗	Bonobos (pygmy chimpanzee)	Pan paniscus	倭黑猩猩
Chinese Hamster	Cricetulus griseus	黑线仓鼠	moss	Physcomitrella patens	球莴藓
papaya	Carica papaya	番木瓜	orangutan: large long-armed ape of Borneo	Pongo pygmaeus	猩猩
green alga	Chlamydomonas reinhardtii	绿藻	loblolly pine	Pinus taeda	火炬松
sea squirt	Ciona intestinalis	玻璃海鞘	black cottonwood	Populus trichocarpa	毛果杨
sea squirt	Ciona savignyi	海鞘	chimpanzee	Pan troglodytes	黑猩猩
soil-living amoeba	Dictyostelium discoideum	盘基网柄菌	rhesus lymphocryptovirus (rhesus LCV, RLV, Cercopithecine HV 15)	Rhesus lymphocryptovirus	恒河猴淋巴腺 伏病毒属
fruit fly	Drosophila melanogaster	黑腹果蝇	brown rat	Rattus norvegicus	褐家鼠
fruit fly	Drosophila pseudoobscura	拟暗果蝇	rhesus monkey	Rhesus monkey	猕猴
zebrafish	Danio rerio	斑马鱼	sorghum (plant)	Sorghum bicolor	高粱
EBV	Epstein Barr	EB病毒	White-lipped Tamarin	Saguinus labiatus	白唇怪柳猴
Japanese puffer fish	Fugu rubripes	河豚	Freshwater Planarian	Schmidtea mediterranea	涡虫
chicken	Gallus gallus	鸡	spikemoss	Selaginella moellendorffii	江南卷柏
gorilla	Gorilla gorilla	大猩猩	sugarcane	Saccharum officinarum	甘蔗
cotton	Gossypium herbaceum	草棉	wild boar (pig)	Sus scrofa	野猪
cotton	Gossypium hirsutum	陆地棉	large black gibbon of Sumatra	Symphalangus syndactylus	合趾猿
Soybean	Glycine max	大豆	Simian virus	Simian virus	猿猴病毒
new world cotton	Gossypium raimondii	雷蒙德氏棉	common wheat	Triticum aestivum	冬小麦
HSV	Herpes Simplex	单纯疱疹病毒	green spotted puffer fish	Tetraodon nigroviridis	绿河豚
cytomegalovirus (CMV)	Human cytomegalovirus	巨细胞病毒	Common Grape Vine	Vitis vinifera	葡萄
HIV	Human immunodeficiency	HIV病毒	clawed frog	Xenopus laevis	爪蟾
Kaposi's sarcoma-associated herpesvirus (KSHV)	Kaposi sarcoma-associated	肉瘤相关疱疹病毒	Western clawed frog	Xenopus tropicalis	非洲爪蟾
Madagascar cat	Lemur catta	环尾狐猴	corn	Zea mays	玉米
Brown Woolly Monkey	Lagothrix lagotricha	褐绒毛猴			

Specifications	
Array format	400
Feature size	11 μm
Oligonucleotide probe length	Up to 25-mer, depending on miRNA target length (perfect match only)
Probes/sequence	Four for miRNAs, ≤ 11 for other non-control RNA target
Non-control RNA target content	
6,703 probe sets for miRBase miRNAs	Four identical probes/set
499 probe sets for snoRNAs from ENSEMBL	≤ 11 probes/set
401 probe sets for snoRNAs from snoRNABase	≤ 11 probes/set
22 probe sets for scaRNAs from snoRNABase	≤ 11 probes/set
Control target content	
95 GC-binned background probe sets	≤ 94 probes/set
54 BioB, C, D, Cre r2 hybridization control probe sets	11 probes/set
9 BioB, C, D, Cre hybridization control probe sets	20 probes/set
22 oligonucleotide spike-in control probe sets	10 identical probes/set (i.e., each probe is tiled 10 times)
10 identical probe sets for human 5.8s rRNA(gi555853)	11 probes/set

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