

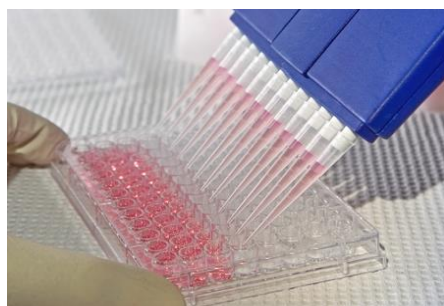
Cell-Based Assays 2017

Page 1/8

Axxam S.p.A. (Italy) offers **functional cell-based assays** for protein targets of relevance to drug discovery research, including challenging targets such as multi subunit ion channels and current “hot” targets of interest. All assays are thoroughly QCed and validated for high throughput screening (HTS) applications using 96- and 384-well titer plates. We are continually developing new assays. If your target of interest is not listed in this catalogue please inquire for availability.

Key Features

- Reliable, high quality assays
 - ▶ optimal cell lines and detection systems
 - ▶ stable expression over time
 - ▶ validated using reference compounds
 - ▶ ion channel assays validated for patch clamp
- Available as off-the-shelf products or as part of contract research projects at Axxam
- Expert technical support
- Assays details can be provided upon request



Custom Assay Development

Axxam undertakes custom assay development projects. Our highly experienced team has developed numerous cell-based assays using cutting-edge technologies, including difficult targets that other groups have found intractable. Axxam’s proprietary technologies may help you to circumvent IP restrictions on your target of interest. Delivery time of a new assay in a 384-well plate-adapted format can be as little as 4 months.

Assay Portfolio (July 2017)

Protein class	No. Assays	Page
GPCRs	59	2-3
Ion Channels	40	4-5
Transporters	19	6
NHRs	5	7
Enzymes	7	7
Cytokine Receptors	1	7
Exchangers	3	7
Toll-Like Receptors	3	8
mRNA Post-Transcriptional Regulation	1	8
Tyrosine Kinase Receptor	2	8



Assay List

Target Class: GPCRs			
Sub-family	Symbol	Aliases / Other Designations	GeneID
Adenosine receptors	ADORA1	Adenosine A1 receptor	134
	Adora1 ^{NEW!}	Mouse adenosine A1 receptor	11539
	Adora1 ^{NEW!}	Rat adenosine A1 receptor	29290
	ADORA2A	Adenosine A2a receptor	135
	Adora2a ^{NEW!}	Mouse adenosine A2a receptor	11540
	Adora2a ^{NEW!}	Rat adenosine A2a receptor	25369
	ADORA2B ^{NEW!}	Adenosine A2b receptor	136
	Adora2b ^{NEW!}	Mouse adenosine A2b receptor	11541
	Adora2b ^{NEW!}	Rat adenosine A2b receptor	29316
	ADORA3 ^{NEW!}	Adenosine A3 receptor	140
	Adora3 ^{NEW!}	Mouse adenosine A3 receptor	11542
Adrenergic receptors	ADRA2A	Adrenergic, alpha-2A-, receptor	150
	ADRA2C	Adrenergic, alpha-2C-, receptor	152
Bile acids receptors	GPBAR1	G protein coupled bile acid receptor 1 -TGR5	151306
Bradykinin receptors	BDKRB1	Bradykinin receptor B1	623
	Bdkrb1 (rat)	Rat bradykinin receptor 1	81509
	BDKRB2	Bradykinin receptor B2	624
Cannabinoid receptors	CNR1	Cannabinoid receptor 1	1268
	CNR2	Cannabinoid receptor 2	1269
Chemokine (CXC) receptors	CCR2	Chemokine (C-C motif) receptor 2	1231
	CCR3	Chemokine (C-C motif) receptor 3	1232
	CCRL1 ^{NEW!}	Chemokine (C-C motif) receptor-like 1	51554
	CCR5 ^{NEW!}	Chemokine (C-C motif) receptor 5	1234
	CX3CR1	Chemokine (C-X3-C motif) receptor 1	1524
	Cx3cr1 (mouse)	Mouse chemokine (C-X3-C motif) receptor 1	13051
	Cx3cr1 (rat)	Rat chemokine (C-X3-C motif) receptor 1	171056
	CXCR1	Interleukin 8 receptor, alpha	3577
	CXCR2	Interleukin 8 receptor, beta	3579
Chemokine (CXC) receptors	CXCR3	CXC chemokine receptor 3	2833
	CMKLR1	Chemokine-Like Receptor 1 - ChemR23	1240

Please be aware that provision of the above listed assays may require third party licenses. All products are for research use only.

Assay List

Target Class: GPCRs (continued)			
Sub-family	Symbol	Aliases / Other Designations	GeneID
Cholinergic receptors	CHRM2	Cholinergic receptor, muscarinic 2	1129
Class Frizzled GPCRs	Smo (<i>endogenous - mouse</i>) NEW!	Mouse smoothed homolog (Drosophila)	319757
Cholecystokinin receptors	CCKAR	Cholecystokinin A receptor	886
Complement component receptors	C5aR1	Complement component 5a receptor 1	728
Dopamine receptors	DRD1	Dopamine receptor D1	1812
	DRD2	Dopamine receptor D2	1813
	DRD3	Dopamine receptor D3	1814
Fatty acid receptors	GPR119	G protein-coupled receptor 119	139760
	FFAR1	Free fatty acid receptor 1, GPR40	2864
	FFAR2	Free fatty acid receptor 2, GPR43	2867
Formyl peptide receptors	FPRL1	FPRL1, formyl peptide receptor-like 1	2358
	FPR1	Formyl peptide receptor-1	2357
Galanin receptors	GALR2	Galanin Receptor 2	8811
Ghrelin	GHSR	Growth hormone secretagogue receptor	2693
Glucagon receptors	GCGR	Glucagon receptor	2642
	GLP1R	Glucagon-like peptide 1 receptor	2740
	Glp1r (<i>rat</i>)	Rat glucagon-like peptide 1 receptor	25051
Glutamate receptor	GRM1 NEW!	Glutamate receptor metabotropic 1	2911
Kynurenic acid receptor	GPR35	G protein-coupled receptor 35	2859
Leukotriene receptors	LTB4R	Leukotriene B4 receptor	1241
Lysophosphatidic acid receptors	LPAR5	Lysophosphatidic acid receptor 5, GPR93	57121
Neuropeptides receptor	NPY2R	Neuropeptide Y receptor 2	4887
Opioid receptors	OPRK1	Opioid receptor, kappa 1	4986
Prokineticin receptors	PROKR1 (GPR73)	Prokineticin receptor 1	10887
	PROKR2 (GPR73L1)	Prokineticin receptor 2	128674
Prostanoid receptors	PTGDR2	GPR44, CRTH2, DP2, Prostaglandin D2 receptor	11251
Protease activated receptors	F2RL3	PAR4, Coagulation factor II (thrombin) receptor-like 3	9002
Serotonin receptor	HTR2A	Serotonin 5-HT-2A receptor	3356
Sphingosine-1 phosphate	S1pr3 (<i>mouse</i>)	<i>Mus musculus</i> Sphingosine-1-phosphate receptor 3	13610

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Assay List

Target Class: Ligand Gated Ion Channels			
Sub-family	Symbol	Aliases / Other Designations	GeneID
Ligand gated cationic channels	P2RX1	Purinergic receptor P2X, ligand-gated ion channel, 1	5023
	P2rx1 (<i>mouse</i>)	Mouse purinergic receptor P2X, ligand-gated ion channel, 1	18436
	P2RX2/P2RX3	Heteromeric P2X2/P2X3 receptor	22953 - 5024
	P2RX3	Purinergic receptor P2X, ligand-gated ion channel, 3	5024
	P2rx3 (<i>rat</i>)	Rat purinergic receptor P2X, ligand-gated ion channel, 3	81739
	P2RX4	Purinergic receptor P2X, ligand-gated ion channel, 4	5025
	P2rx4 (<i>mouse</i>)	Mouse purinergic receptor P2x ligand-gated ion channel, 4	18438
	P2RX7	Purinergic receptor P2X, ligand-gated ion channel, 7	5027
	P2rx7 (<i>rat</i>)	Rat purinergic receptor P2X, ligand-gated ion channel, 7	29665
	P2rx7 (<i>mouse</i>)	Mouse purinergic receptor P2X, ligand-gated ion channel, 7	18439
Chloride channels	GABRA1-GABRB1-GABRG2	Gamma-aminobutyric acid (GABA) A receptor, alpha 1, beta 1, gamma 2	2554 - 2560 - 2566
	GLRA1	Glycine receptor, alpha 1	2741
Transient receptor potential channels	TRPA1	ANKTM1, Transient receptor potential cation channel subfamily A member 1	8989
	TRPC3	Transient receptor potential cation channel, subfamily C, member 3	7222
	TRPC5	Transient receptor potential cation channel, subfamily C, member 5	7224
	TRPC6	Transient receptor potential cation channel, subfamily C, member 6	7225
	TRPC7	Transient receptor potential cation channel, subfamily C, member 7	57113
	TRPM2	Transient receptor potential cation channel, subfamily M, member 2	7226
	TRPM5	Transient receptor potential cation channel, subfamily M, member 5	29850
	TRPM7	Transient receptor potential cation channel, subfamily M, member 7	54822
	TRPM8	Transient receptor potential cation channel, subfamily M, member 8	79054
	TRPV1	Transient receptor potential cation channel, subfamily V, member 1	7442

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Target Class: Voltage-Gated Ion Channels			
Sub-family	Symbol	Aliases / Other Designations	GenelD
Voltage gated Na ⁺ channels	SCN5A (Nav 1.5) NEW!	Na ⁺ channel, voltage-gated, type V, alpha subunit	6331
	SCN9A (Nav1.7)	Na ⁺ channel, voltage-gated, type IX, alpha subunit	6335
Voltage gated K ⁺ channels	KCNA3 (Kv1.3)	K ⁺ voltage-gated channel, Shaker-related subfamily A, member 3	3738
	KCNA5 (Kv1.5)	K ⁺ voltage-gated channel, Shaker-related subfamily A, member 5	3741
	KCNB1 (Kv2.1)	K ⁺ voltage-gated channel, Shab-related subfamily B, member 1	3745
	KCNQ2/KCNQ3 (Kv7.2/Kv7.3) NEW!	Heteromeric Potassium voltage-gated channel subfamily Q member 2; potassium voltage-gated channel subfamily Q member 3	3785 - 3786
Inwardly rectifying K ⁺ channels	KCNJ4 (Kir 2.3)	K ⁺ inwardly-rectifying channel, subfamilyJ, member 4	3761
Voltage gated Ca ²⁺ channels	CACNA1C (Cav 1.2)	Ca ²⁺ channel, voltage-dependent, L type, alpha 1C subunit	775
	CACNA1D (Cav1.3)	Ca ²⁺ channel, voltage-dependent, L type, alpha 1D subunit	776
	CACNA1B (Cav 2.2) <i>endogenous</i> NEW!	Ca ²⁺ channel, voltage-dependent, N type, alpha 1B subunit	774
	CACNA1I (Cav 3.3) NEW!	Ca ²⁺ channel, voltage-dependent, T type, alpha 1I subunit	8911
Store-operated Ca ²⁺ channels	CRAC	ORAI1(calcium release-activated calcium modulator 1) + STIM-1 (stromal interaction molecule 1)	84876 - 6786
Calcium activated Cl ⁻ channels	TMEM16A	Trans-membrane protein 16A (Cl channel)	55107
Calcium activated K ⁺ channels	KCNN3	Potassium intermediate/small conductance calcium-activated channel, subfamily N, member 3	3782
	KCNN4	Potassium channel, calcium activated intermediate/small conductance subfamily N alpha, member 4	3783
	KCNN4 (<i>endogenous</i>)	Potassium channel, calcium activated intermediate/small conductance subfamily N alpha, member 4	3783
K ⁺ /Na ⁺ hyperpolarization-activated CNG channels	HCN2	Hyperpolarization activated cyclic nucleotide-gated potassium channel 2	610
	HCN4	Hyperpolarization activated cyclic nucleotide-gated potassium channel 4	10021

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Assay List

Target Class: Transporters			
Sub-family	Symbol	Aliases / Other Designations	GeneID
ATP binding cassette	MRP4 (ABCC4)	ATP-binding cassette, sub-family C (CFTR/MRP), member 4	10257
Glucose transporters	Slc2a1 (GLUT1-rat)	Slc2a1 solute carrier family 2 (facilitated glucose transporter), member 1	24778
	Slc2a2 (GLUT2-rat)	Slc2a2 solute carrier family 2 (facilitated glucose transporter), member 2	25351
	Slc2a3 (GLUT3-rat)	Slc2a3 solute carrier family 2 (facilitated glucose transporter), member 3	25551
	SLC2A1 (GLUT1-canine)	SLC2A1 solute carrier family 2 (facilitated glucose transporter), member 1	482437
	SLC2A2 (GLUT2-canine)	SLC2A2 solute carrier family 2 (facilitated glucose transporter), member 2	488165
	SLC2A3 (GLUT3-canine)	SLC2A2 solute carrier family 2 (facilitated glucose transporter), member 3	403997
Neurotransmitter transporters	SLC6A3	DAT, Dopamine transporter	6531
	SLC6A1	GAT1, GABA transporter 1	6529
	SLC6A11	GAT3, GABA transporter 3	6538
	SLC6A9	GLYT1, Glycin transporter 1	6536
	SLC6A5	GLYT2, Glycin transporter 2	9152
	SLC6A2	NET, Norepinephrine transporter	6530
Sodium phosphate cotransporters	SLC34A1 (NPT2a)	Solute carrier family 34 (sodium phosphate), member 1	6569
	Slc34a1 (NPT2a rat)	Solute carrier family 34 (sodium phosphate), member 1	25548
	SLC34A1 (NPT2a dog)	Solute carrier family 34 (sodium phosphate), member 1	479275
	SLC34A2 (NPT2b)	Solute carrier family 34 (sodium phosphate), member 2	10568
	SLC34A3 (NPT2c mutant)	Solute carrier family 34 (sodium phosphate), member 3	142680
-----	SLC40A1 (FPN1) <small>NEW!</small>	Solute carrier family 40	30061

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Assay List

Target Class: Nuclear Hormone Receptors			
Sub-family	Symbol	Aliases / Other Designations	GeneID
Nuclear hormone receptors	NR3C1	GR, Glucocorticoid receptor, nuclear receptor subfamily 3, group C, member 1	2908
Nuclear hormone receptors	NR3C2	MR, mineralcorticoid receptor, nuclear receptor subfamily 3, group C, member 2	4306
	PPARA	PPAR-alpha, Peroxisome proliferator-activated receptor alpha	5465
	PPARD	PPAR-delta, Peroxisome proliferator-activated receptor delta	5467
	PGR	Progesteron receptor	5241

Target Class: Enzymes			
Sub-family	Symbol	Aliases / Other Designations	GeneID
Adenylate cyclase	ADCY5 NEW!	Adenylate cyclase 5	111
	ADCY6 NEW!	Adenylate cyclase 6	112
Nitric oxide synthase	NOS3 NEW!	Nitric oxide synthase 3 (endothelial cell)	4846
	NOS2 NEW!	Inducible nitric oxide synthase (type II)	4843
Cysteine protease	MALT1 NEW!	Mucosa associated lymphoid tissue Lymphoma Translocation gene 1	10892
Synthase kinase	GSK3β NEW!	Human glycogen synthase kinase 3 beta	2932
	GSK3β (<i>endogenous</i>) NEW!	Human glycogen synthase kinase 3 beta	2932

Target Class: Cytokine Receptors			
Sub-family	Symbol	Aliases / Other Designations	GeneID
Cytokine receptort	TNFR (<i>endogenous</i>) NEW!	Tumor necrosis factor alpha receptor	7132

Target Class: Exchangers			
Sub-family	Symbol	Aliases / Other Designations	GeneID
Na ⁺ /K ⁺ /Ca ²⁺ exchangers	SLC24A3 (NCKX3)	Solute carrier family 24 (sodium/potassium/calcium exchanger), member 3	57419
Na ⁺ /Ca ²⁺ exchangers	SLC8A1 (NCX1)	Solute carrier family 8 (sodium/calcium exchanger), member 1	6546
	SLC8A2 (NCX2)	Solute carrier family 8 (sodium/calcium exchanger), member 2	6543

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Assay List

Target Class: Toll-Like Receptors

Sub-family	Symbol	Aliases / Other Designations	GeneID
Toll-like receptor 4	TLR4 (endogenous)	TOLL; CD284; hToll; ARMD10	7099
	<i>Tlr4</i> (mouse-endogenous)	Mouse toll-like receptor 4	21898
Toll-like receptor 9	TLR9	CD289	54106

Target Class: mRNA Post-Transcriptional Regulation

Sub-family	Symbol	Aliases / Other Designations	GeneID
mRNA post-transcriptional regulation	NOS3 ^{NEW!}	Nitric oxide synthase 3 (endothelial cell)	4846

Target Class: Tyrosine Kinase Receptors

Sub-family	Symbol	Aliases / Other Designations	GeneID
Tyrosine kinase receptor	Ntrk1 (endogenous - rat) ^{NEW!}	Ntrk1 neurotrophic tyrosine kinase, receptor, type 1 (<i>Rattus norvegicus</i>)	59109
	NTRK2 ^{NEW!}	Neurotrophic tyrosine kinase, receptor, type 2	4915

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