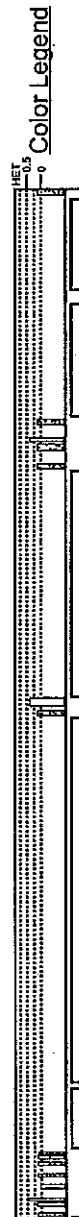


gene model		Contig Label	Contig	mmma	protein	mmma orientation	transcript	snp count
(contig mRNA transcript):		reference	NT_021937.NM_138697.NP_619642	forward	plus strand 8, coding			

Region	Contig position	mRNA pos	dbSNP rs# cluster id	Heterozygosity	Validation	3D	OMIM	Function	dbSNP allele	Protein residue	Codon pos	Amino acid pos
exon_1	1152801	1						start codon				1
exon_1	1152811	11	rs35375392	0.034				nonsynonymous	A	Tyr [Y]	2	4
				0.034				contig reference	G	Cys [C]	2	4
exon_2	1168473	329	rs41278020	N.D.				nonsynonymous	T	Val [V]	2	110
				N.D.				contig reference	C	Ala [A]	2	110
exon_3	1172598	1039	rs10864628	0.128	✓	Yes		nonsynonymous	G	Glu [E]	1	347
				0.128	✓	Yes		contig reference	A	Lys [K]	1	347
	1172626	1067	rs41307749	N.D.				nonsynonymous	G	Cys [C]	2	356
				N.D.				contig reference	C	Ser [S]	2	356
	1172673	1114	rs34160967	0.137	✓			nonsynonymous	A	Thr [T]	1	372
				0.137	✓			contig reference	G	Ala [A]	1	372
exon_5	1174423	1520	rs35118458	0.059	✓			nonsynonymous	A	Gln [Q]	2	507
				0.059	✓			contig reference	G	Arg [R]	2	507
exon_6	1176292	1807	rs41278022	N.D.				nonsynonymous	T	Cys [C]	1	603
				N.D.				contig reference	C	Arg [R]	1	603
	1176759	2274	rs34857011	0.126	✓			synonymous	A	Glu [E]	3	758
				0.126	✓			contig reference	G	Glu [E]	3	758

FIG. 1

gene model	Contig Label	Contig	mRNA	protein	mRNA orientation	transcript	snp count
(contig mRNA transcript):	reference	NT 004610 NM_152232 NP_689418			reverse	minus strand 17, coding	



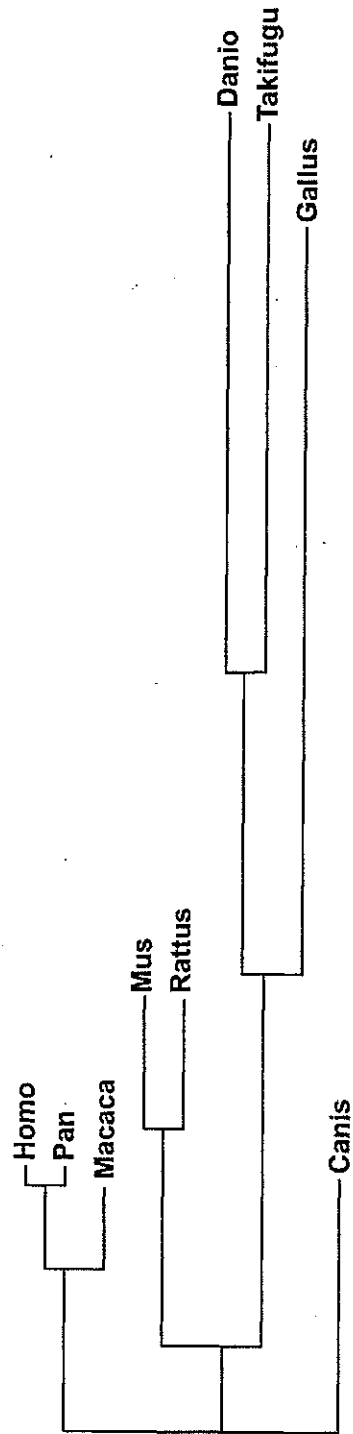
Region	Contig position	mRNA pos	dbSNP rs# cluster id	Heterozygosity	Validation	3D	OMIM	Function	dbSNP allele	Protein residue	Codon pos	Amino acid pos
exon_6	1990442	2514	rs9988418	0.074	✓			nonsynonymous	A	Lys [K]	2	838
				0.074	✓			contig reference	G	Arg [R]	2	838
	1990585	2731	rs12075191	0.104	✓			synonymous	T	Ile [I]	3	790
				0.104	✓			contig reference	C	Ile [I]	3	790
	1990636	2320	rs12033832	0.457	✓			synonymous	T	Ser [S]	3	773
				0.457	✓			contig reference	C	Ser [S]	3	773
	1990843	2113	rs34542537	0.030	✓			synonymous	T	Pro [P]	3	704
				0.030	✓			contig reference	C	Pro [P]	3	704
	1991007	1949	rs41273165	N.D.				nonsynonymous	A	Met [M]	1	650
				N.D.				contig reference	G	Val [V]	1	650
	1991171	1785	rs41273167	N.D.				nonsynonymous	C	Thr [T]	2	595
				N.D.				contig reference	T	Ile [I]	2	595
	1991235	1721	rs6662276	0.122	✓			nonsynonymous	A	Thr [T]	1	574
				0.122	✓			contig reference	G	Ala [A]	1	574
	1991236	1720	rs11805253	N.D.	⊗			synonymous	T	Ala [A]	3	573
				N.D.	⊗			contig reference	C	Ala [A]	3	573

FIG. 2A

exon_4	2000188	1457	rs28374389	N.D.					nonsynonymous	G	Val [V]	1	486
				N.D.					contig reference	A	Ile [I]	1	486
	2000300	1345	rs9439751	N.D.					synonymous	A	Leu [L]	3	448
				N.D.					contig reference	G	Leu [L]	3	448
	2000315	1330	rs35775756	N.D.					synonymous	T	Asp [D]	3	443
				N.D.					contig reference	C	Asp [D]	3	443
exon_3	2005063	1244	rs35605435	N.D.					nonsynonymous	A	Ile [I]	1	415
				N.D.					contig reference	G	Val [V]	1	415
	2005356	951	rs34545913	N.D.					nonsynonymous	C	Pro [P]	2	317
				N.D.					contig reference	G	Arg [R]	2	317
	2005357	950	rs34447754	N.D.					nonsynonymous	G	Gly [G]	1	317
				N.D.					contig reference	C	Arg [R]	1	317
	2005424	883	rs28470550	N.D.			Yes		synonymous	G	Thr [T]	3	294
				N.D.			Yes		contig reference	T	Thr [T]	3	294
	2005735	572	rs35874116	N.D.					nonsynonymous	G	Val [V]	1	191
				N.D.					contig reference	A	Ile [I]	1	191
exon_1	2010471	27	rs9701796	N.D.					nonsynonymous	G	Cys [C]	2	9
				N.D.					contig reference	C	Ser [S]	2	9
exon_1	2010496	2							start codon				1

FIG. 2B

9 Species



Mammals only

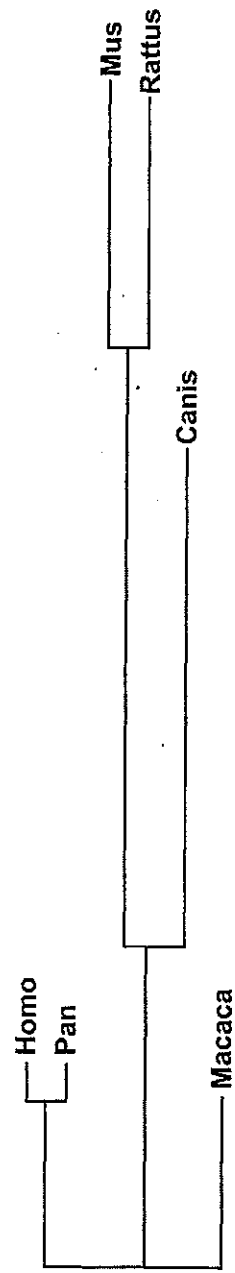


FIG. 3

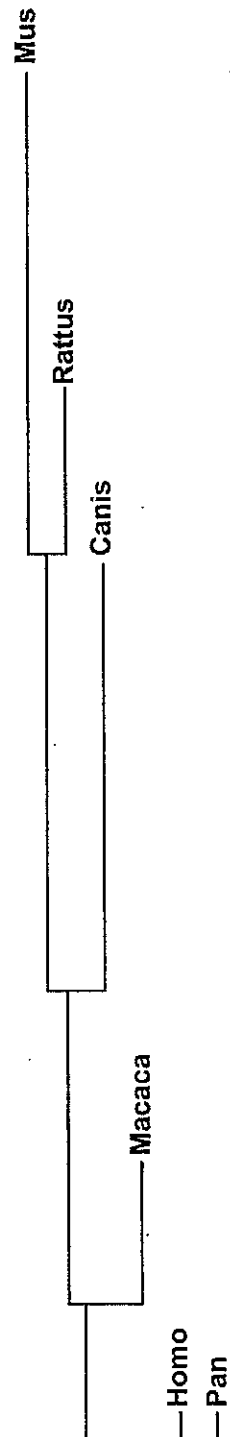


FIG. 4

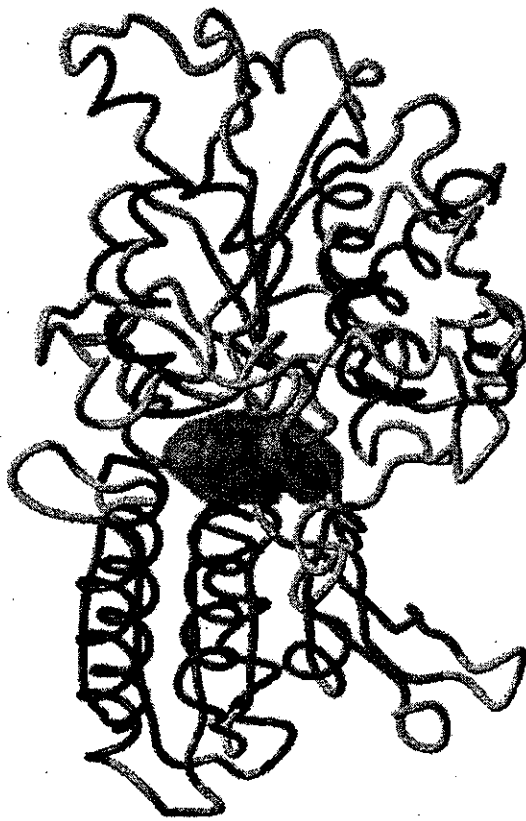


FIG. 5



FIG. 6

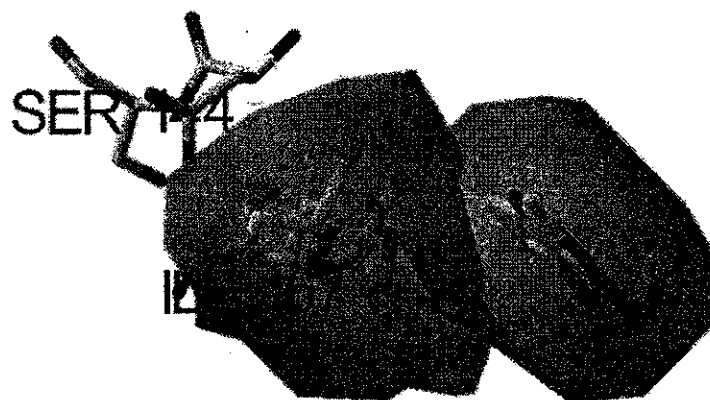


FIG. 7A

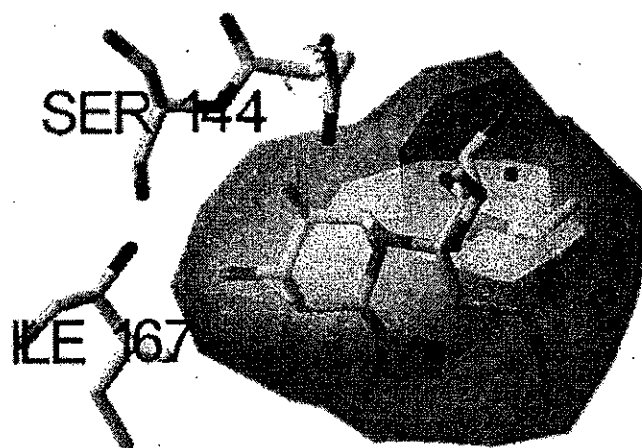


FIG. 7B

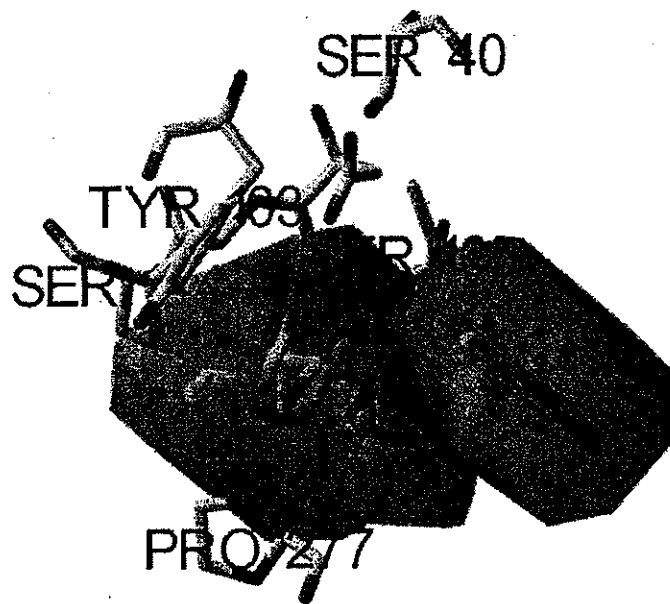


FIG. 8A

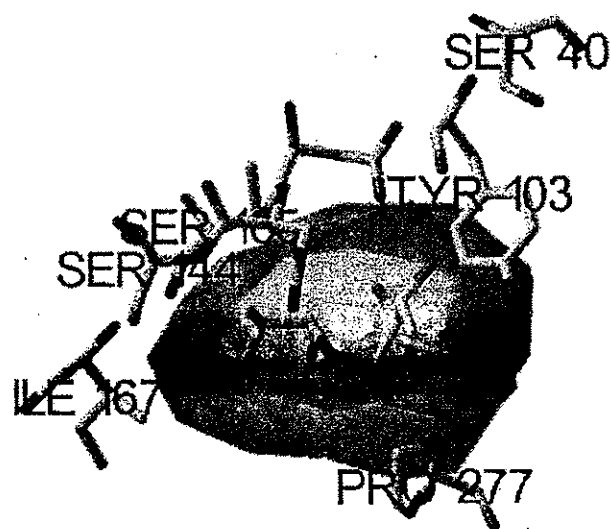


FIG. 8B

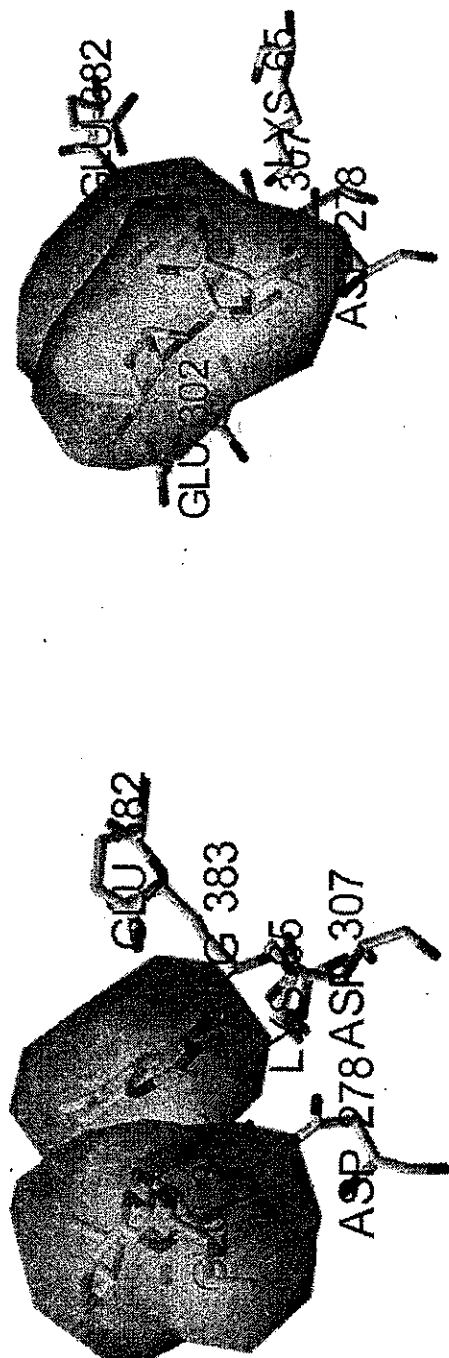


FIG. 9A

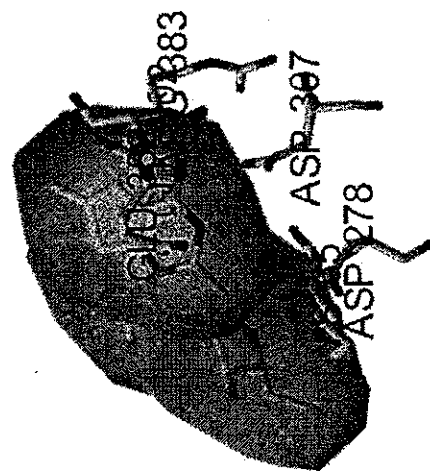


FIG. 9C

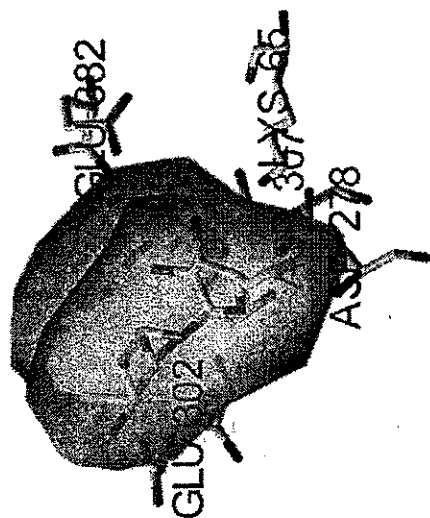


FIG. 9B

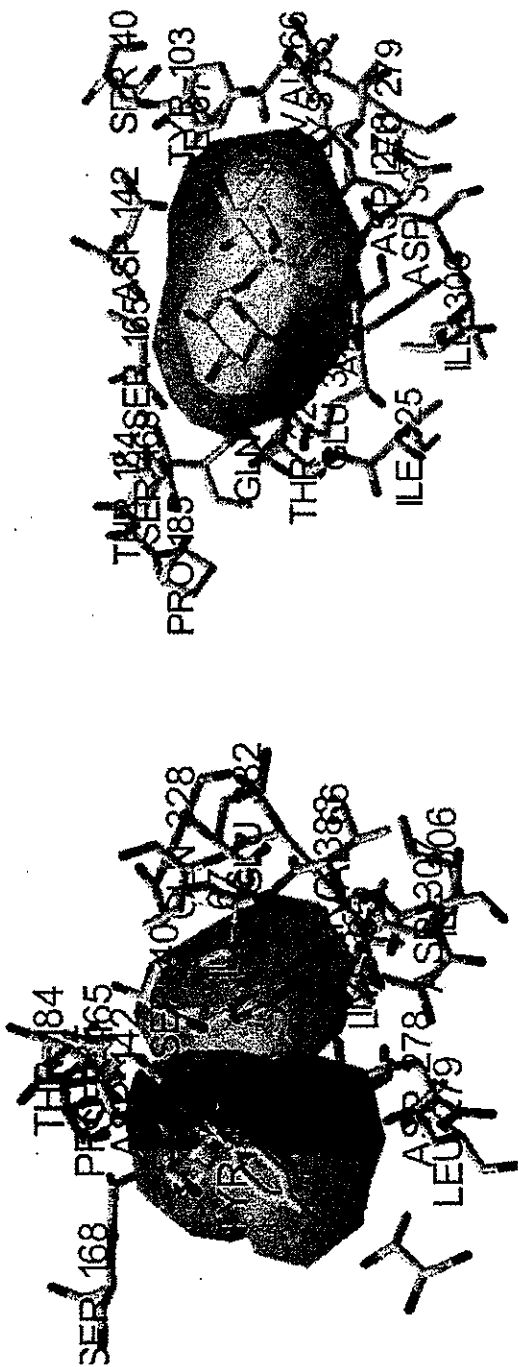


FIG. 10A

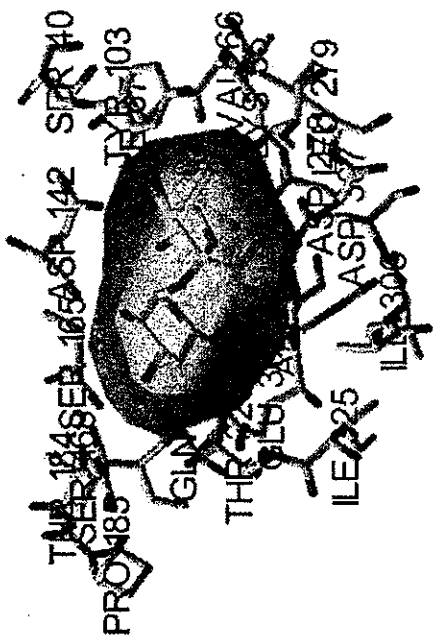


FIG. 10B

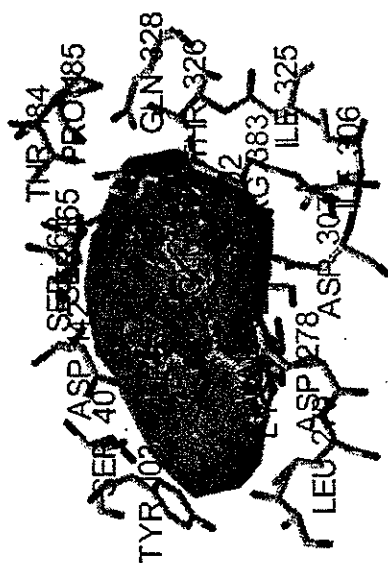


FIG. 10C

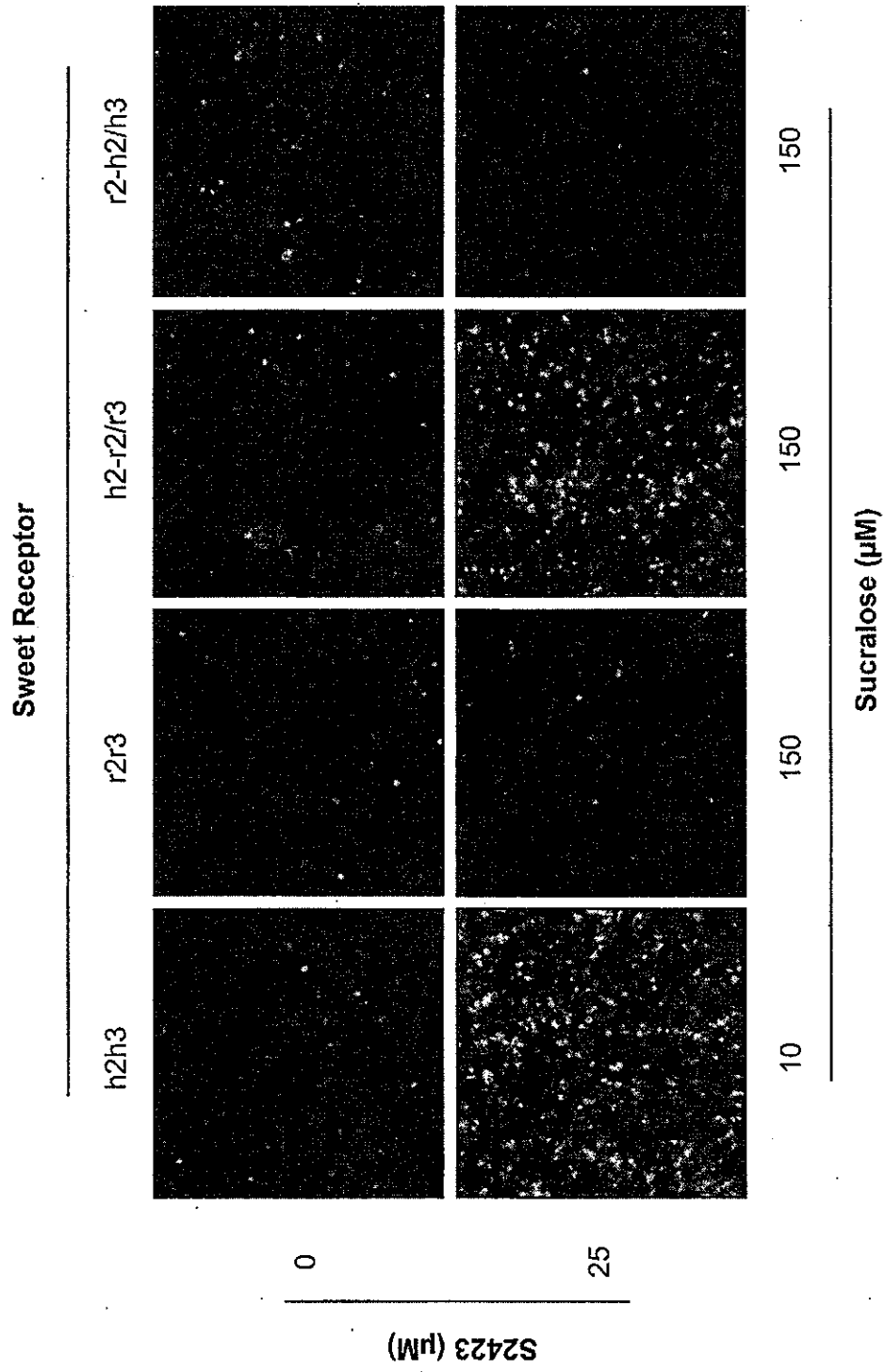


FIG. 11

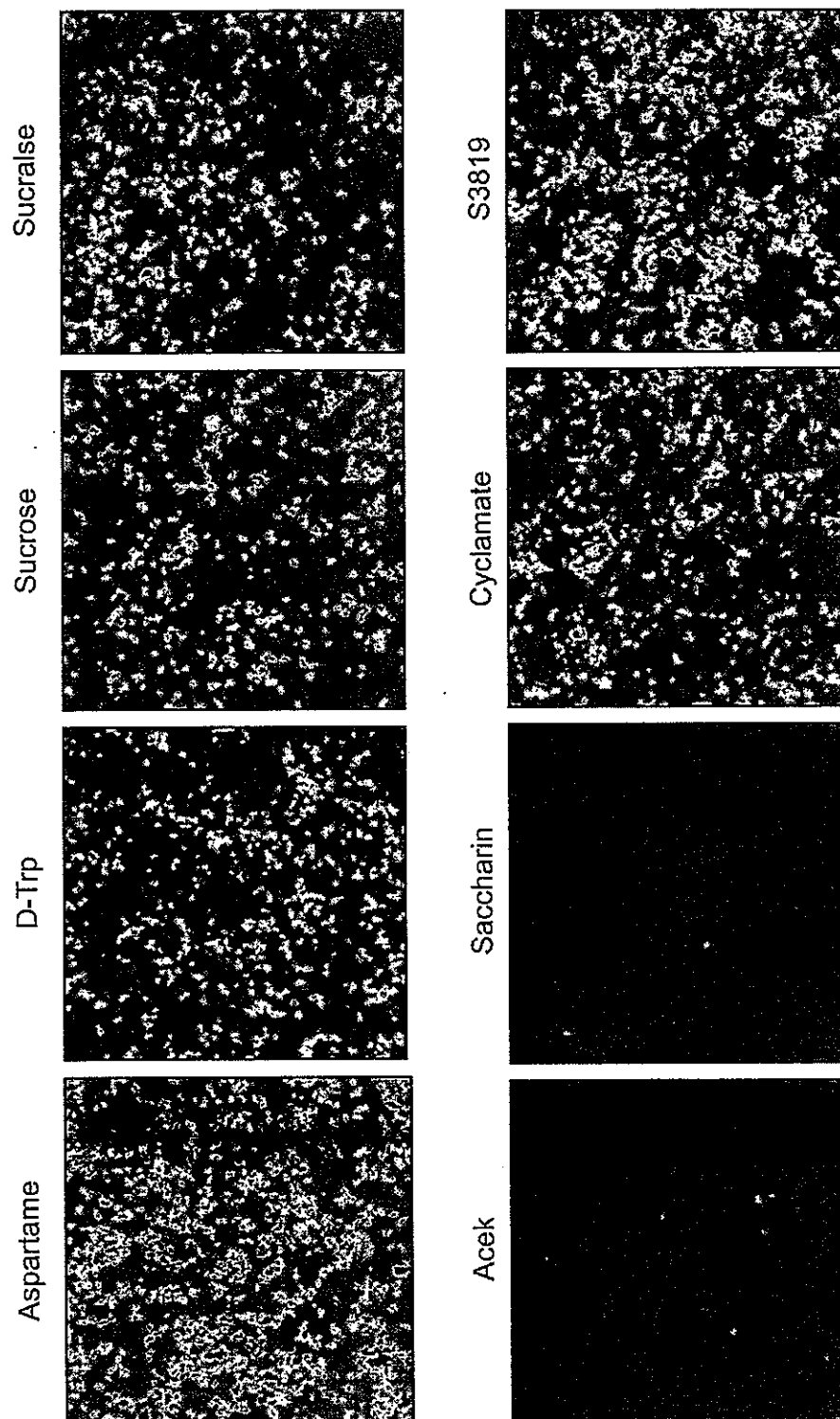


FIG. 12