

Revision: 05/12/2015 Supersedes Revision: 09/22/2011

	HEMICAL				,	Supersedes Revision: 09/22/2011
		acc	ording to Regulation (EC) No. 190	07/2006 as amended b	oy (EC) No. 1272/200	08
		Section 1.	Identification of the Substar	nce/Mixture and of	the Company/U	ndertaking
1.1	Produc	t Code:	700581			
	Produc	t Name:	Autotaxin Assay Buffer (10X)		
1.2	Releva	nt identified uses o	f the substance or mixture a	and uses advised a	against:	
	Relev	ant identified uses	: For research use only, n	ot for human or vete	erinary use.	
1.3	Details	of the Supplier of	he Safety Data Sheet:			
	Comp	oany Name:	Cayman Chemical Comp 1180 E. Ellsworth Rd. Ann Arbor, MI 48108	bany		
	Web s	site address:	www.caymanchem.com			
	Inform	nation:	Cayman Chemical Comp	bany	+1 (73	4)971-3335
1.4	Emerge	ency telephone nur	nber:			
	Emer	gency Contact:	CHEMTREC Within USA	and Canada:	+1 (80	0)424-9300
			CHEMTREC Outside US	A and Canada:	+1 (70	3)527-3887
			Section 2. Ha	zards Identifi	cation	
2.1	Classifi	ication of the Subs	tance or Mixture:			
2.1.1	Classif	fication according	to Regulation (EC) No 1272/2	2008 [CLP]:		
	Skin	Corrosion/Irritatior	a, Category 3			
2.2	Label E	lements:				
2.2.1	Labelir	ng according to Re	gulation (EC) No 1272/2008	[CLP]:		
2.3	GHS H316 GHS No ph GHS P332- GHS Pleas	Storage and Dispo e refer to Section 7 se Human Health	s: : n occurs, get medical advice/a	^r Disposal informatio		
	Effects	and Symptoms:	Material may be initiating to t	ne mucous membra	anes and upper res	spiratory tract.
	Effects	and Symptoms:	May be harmful by inhalation May cause eye or respiratory	n, ingestion, or skin a v system irritation.	absorption.	spiratory tract. t been thoroughly investigated.
	Effects		May be harmful by inhalation May cause eye or respiratory	n, ingestion, or skin a / system irritation. e, the toxicological p	absorption.	been thoroughly investigated.
CAS	#/	Sect	May be harmful by inhalation May cause eye or respiratory To the best of our knowledge ion 3. Composition ponents (Chemical Name)/	n, ingestion, or skin a / system irritation. e, the toxicological p	absorption.	been thoroughly investigated.
RTEC	#/ S\$#	Sect Hazardous Comp	May be harmful by inhalation May cause eye or respiratory To the best of our knowledge ion 3. Composition ponents (Chemical Name)/	n, ingestion, or skin / system irritation. e, the toxicological p //Information	absorption. properties have not On Ingredie EC No./	t been thoroughly investigated.
RTEC 77- TY290	# / -86-1 -00000	Sect Hazardous Comp REACH Registrat	May be harmful by inhalation May cause eye or respiratory To the best of our knowledge ion 3. Composition ponents (Chemical Name)/	n, ingestion, or skin y system irritation. e, the toxicological p /Information Concentration	absorption. properties have not ON Ingredie EC No./ EC Index No. 201-064-4	Been thoroughly investigated. TS GHS Classification Skin Corr. 2: H315 Eye Damage 2: H319

Multi-region format



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ZC0110000 NA Section 4. First Aid Measures 4.1 **Description of First Aid** Measures: In Case of Inhalation: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention. In Case of Skin Contact: Immediately wash skin with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse. Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Have eyes examined In Case of Eye Contact: and tested by medical personnel. Wash out mouth with water provided person is conscious. Never give anything by mouth to an In Case of Ingestion: unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel. Section 5. Fire Fighting Measures 5.1 Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Suitable Extinguishing Use water spray to cool fire-exposed containers. Media: Unsuitable Extinguishing A solid water stream may be inefficient. Media: 5.2 Flammable Properties and No data available. Hazards: No data. Flash Pt: LEL: No data. UEL: No data. **Explosive Limits:** No data. Autoignition Pt: 5.3 Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes. Section 6. Accidental Release Measures 6.1 **Protective Precautions,** Avoid breathing vapors and provide adequate ventilation. Protective Equipment and As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves). **Emergency Procedures:** 6.2 Environmental Take steps to avoid release into the environment, if safe to do so. **Precautions:** 6.3 Methods and Material For Contain spill and collect, as appropriate. Containment and Cleaning Transfer to a chemical waste container for disposal in accordance with local regulations. Up: Section 7. Handling and Storage 7.1 Precautions To Be Taken Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure. in Handling: 7.2 Precautions To Be Taken Keep container tightly closed. Store in accordance with information listed on the product insert. in Storing: Multi-region format



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77- 77- 1003 7732 CAS #	Exposure Parameters: Partial Chemical I 86-1 Trizma base 5-04-8 Calcium chloride	Name	Britain EH40		France VL	Europe
1003 7732 CAS #	86-1 Trizma base	Name			France VL	Europe
1003 7732 CAS #						I
7732 CAS #	5-04-8 Calcium chloride		No data.		No data.	No data.
CAS #			No data.		No data.	No data.
CAS #	2-18-5 Water		No data.		No data.	No data.
77-	Partial Chemical	Name	OSHA TWA		ACGIH TWA	Other Limits
11-	86-1 Trizma base		No data.		No data.	No data.
1003	5-04-8 Calcium chloride		No data.		No data.	No data.
7732	2-18-5 Water		No data.		No data.	No data.
3.2	Exposure Controls:		1		•	•
	Personal protection equip Eye Protection: Protective Gloves: Other Protective Clothing: Respiratory Equipment (Specify Type): Work/Hygienic/Maintenan ce Practices:	Safety glasses Compatible chemica Lab coat NIOSH approved re Do not take internal Facilities storing or shower. Wash thoroughly af No data available.	al-resistant gloves espirator, as cond lly. utilizing this mate ter handling.	s tions warrant. rial should be e	equipped with an eyev	vash facility and a sa
	Se	ection 9. Phy	vsical and C	hemical F	Properties	
).1	Information on Basic Phys		-			
	Physical States:		[X] Liquid [] Solid		
	Appearance and Odor:	Solution 9.0				
	pH: Melting Point:	No data.				
	Boiling Point:	No data.				
	Flash Pt:	No data.				
	Evaporation Rate:	No data.				
	Flammability (solid, gas):	No data ava	ilable.			
	Explosive Limits:	LEL: No da		UEL: N	No data.	
	Vapor Pressure (vs. Air or Hg):	mm No data.				
	Vapor Density (vs. Air = 1)	: No data.				
	Specific Gravity (Water = 7)					
		No data.				
	Solubility in Water:					

Multi-region format



	Other Info	mation						
	Percent V	/olatile:	No d	lata.				
			Secti	ion 10. Stability an	d Reactiv	vity		
10.1	Reactivit	y:	No data ava	ailable.				
10.2	Stability:		Unstable [] Stable [X]				
10.3	Stability	Note(s):	Stable if stor	red in accordance with inforr	nation listed c	on the product	insert.	
	Polymeri	zation:	Will occur [] Will not occur [X]				
10.4	Conditio	ns To Avoid:	No data ava	ailable.				
10.5	Incompa	tibility - Materials	strong oxidiz	zing agents				
	To Avoid	:						
10.6	Hazardou	JS	carbon dioxi	ide				
	Decompo	osition or	carbon mon	oxide				
	Byprodu	cts:	nitrogen oxid	des				
			Sectio	on 11. Toxicologica	I Informa	ation		
11.1	Informati	on on	The toxicolo	ogical effects of this product h	nave not been	n thoroughly st	tudied.	
	Toxicolo	gical Effects:						
Carcir	nogenicity	:	NTP? No	IARC Monographs? No	OSHA Re	egulated? No		
CAS	#	Hazardous Com	ponents (Ch	emical Name)	NTP	IARC	ACGIH	OSHA
77	-86-1	Trizma base			n.a.	n.a.	n.a.	n.a.
1003	35-04-8	Calcium chloride			n.a.	n.a.	n.a.	n.a.
773	2-18-5	Water			n.a.	n.a.	n.a.	n.a.
			Sect	ion 12. Ecological	Informati	ion	•	•
12.1	Toxicity:			se into the environment.				
			Runoff from	fire control or dilution water	may cause po	ollution.		
12.2	Persister	nce and	No data ava	ailable.				
	Degradal	bility:						
12.3	Bioaccur	nulative	No data ava	ailable.				
	Potential	:						
12.4	Mobility	in Soil:	No data ava	ailable.				
12.5	-	of PBT and vPvB	No data ava	ailable.				
	assessm							
12.6	Other ad	verse effects:	No data ava	ailable.				
			Sectio	on 13. Disposal Co	nsiderati	ions		
13.1	Waste Di	sposal Method:	Dispose in a	accordance with local, state,	and federal re	egulations.		
		-						
13.1	Waste Di	sposal Method:		•				



RANSPORT (US E r Shipping Name: d Class: hber: RANSPORT (Euro hipping Name: ss: NSPORT (ICAO/I Shipping Name: hsport	Not dangerous goods. Ppean ADR/RID): Not dangerous goods. ATA): Not dangerous goods. Transport in accordance with lo	ocal, state, and feder	ral regulations.	
d Class: hber: RANSPORT (Euro hipping Name: :: ss: NSPORT (ICAO/I Shipping Name:	opean ADR/RID): Not dangerous goods. ATA): Not dangerous goods. Transport in accordance with lo	ocal, state, and feder	ral regulations.	
nber: RANSPORT (Euro nipping Name: :: ss: NSPORT (ICAO/I Shipping Name:	Not dangerous goods. ATA): Not dangerous goods. Transport in accordance with lo	ocal, state, and feder	ral regulations.	
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ss: NSPORT (ICAO/I Shipping Name:	Not dangerous goods. Transport in accordance with lo	ocal, state, and feder	ral regulations.	
Shipping Name:	Not dangerous goods. Transport in accordance with lo	ocal, state, and feder	ral regulations.	
Shipping Name:	Not dangerous goods. Transport in accordance with lo	ocal, state, and feder	ral regulations.	
nsport		ocal, state, and feder	ral regulations.	
	Continu 15 Dogu		-	
	Castion 15 Dagu			
	Section 15. Regu	latory Informa	ation	
perfund Amendm	ents and Reauthorization Act	of 1986) Lists		
Hazardous Com	oonents (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
Trizma base		No	No	Yes-Cat. N106
Calcium chloride		No	No	No
Water		No	No	No
Hazardous Com	oonents (Chemical Name)	Other US EPA or	r State Lists	
Trizma base				S: No; TSCA: Yes -
Calcium chloride		CAA HAP,ODC: PROP.65: No	No; CWA NPDES:	No; TSCA: No; CA
Water				No; TSCA: Yes -
rmation	This SDS was prepared in acco	ordance with 29 CFF	R 1910.1200 and Re	egulation (EC)
	No.1272/2008.			
	Section 16. Oth	ner Informatio	on	
	05/12/2015			
mation About	No data available.			
y or Disclaimer:	currently available to us. However express or implied, with respect	ver, we make no war t to such information	rranty of merchanta , and we assume n	ability or any other warranty, no liability resulting from its
	Hazardous Com Trizma base Calcium chloride Water Hazardous Com Trizma base Calcium chloride Water mation About	Hazardous Components (Chemical Name) Trizma base Calcium chloride Water Hazardous Components (Chemical Name) Trizma base Calcium chloride Water Calcium chloride Water Water Water This SDS was prepared in accord No.1272/2008. Section 16. Otte 05/12/2015 mation About No data available. y or Disclaimer: DISCLAIMER: This information currently available to us. However express or implied, with respect use. Users should make their or the state of the	Trizma base No Calcium chloride No Water No Hazardous Components (Chemical Name) Other US EPA or Trizma base CAA HAP,ODC: Inventory; CA PI Calcium chloride CAA HAP,ODC: Inventory; CA PI Calcium chloride CAA HAP,ODC: PROP.65: No Water CAA HAP,ODC: Inventory; CA PI rmation This SDS was prepared in accordance with 29 CFF No.1272/2008. Section 16. Other Information 05/12/2015 mation About No data available. v or Disclaimer: DISCLAIMER: This information is believed to be ac currently available to us. However, we make no wai express or implied, with respect to such information use. Users should make their own investigations to	Hazardous Components (Chemical Name) S. 302 (EHS) S. 304 RQ Trizma base No No Calcium chloride No No Water No No Hazardous Components (Chemical Name) Other US EPA or State Lists Trizma base CAA HAP,ODC: HAP; CWA NPDES: Inventory; CA PROP.65: No Calcium chloride CAA HAP,ODC: No; CWA NPDES: PROP.65: No Vater CAA HAP,ODC: No; CWA NPDES: Inventory; CA PROP.65: No Water CAA HAP,ODC: No; CWA NPDES: Inventory; CA PROP.65: No Water CAA HAP,ODC: No; CWA NPDES: Inventory; CA PROP.65: No Water CAA HAP,ODC: No; CWA NPDES: Inventory; CA PROP.65: No Water Disclaimer: O5/12/2008. Section 16. Other Information 05/12/2015 No data available. y or Disclaimer: DISCLAIMER: This information is believed to be accurate and represe currently available to us. However, we make no warranty of merchanta express or implied, with respect to such information, and we assume n use. Users should make their own investigations to determine the suit



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		Section 1.	Identification of the Substar	nce/Mixture and of	f the Company/U	ndertaking
.1	Product C	Code:	700582			
	Product N	lame:	Autotaxin (human recom	binant) Assay Reag	gent	
.2	Relevant	identified uses o	f the substance or mixture a	and uses advised a	against:	
	Relevan	t identified uses	: For research use only, n	ot for human or vete	erinary use.	
.3	Details of	the Supplier of t	he Safety Data Sheet:			
	Compar	ny Name:	Cayman Chemical Comp 1180 E. Ellsworth Rd. Ann Arbor, MI 48108	bany		
	Web site	e address:	www.caymanchem.com			
	Informa	tion:	Cayman Chemical Comp	bany	+1 (73	4)971-3335
1.4	Emergen	cy telephone nur	nber:			
	Emerge	ncy Contact:	CHEMTREC Within USA CHEMTREC Outside US		-	0)424-9300 3)527-3887
			Section 2. Ha	zards Identifi		,
2.1	Classifica	ation of the Subs	tance or Mixture:			
2.1.1	Classific	ation according	to Regulation (EC) No 1272/	2008 [CLP]:		
	Skin Co	orrosion/Irritation	i, Category 3			
.2	Label Ele	ments:				
2.2.1	Labeling	according to Re	gulation (EC) No 1272/2008	[CLP]:		
	GHS Ha H316: C GHS Pr	gnal Word: azard Phrases: causes mild skin ir ecaution Phrase ses apply.				
	-	esponse Phrases	:			
		•	n occurs, get medical advice/a	ttention.		
		orage and Dispo				
			for Storage and Section 13 for	Disposal information	on.	
2.3	Adverse	Human Health nd Symptoms:	Causes mild skin irritation. Material may be irritating to t May be harmful by inhalation May cause eye or respirator	he mucous membra n, ingestion, or skin a / system irritation.	anes and upper res absorption.	spiratory tract. t been thoroughly investigated.
		Sect	ion 3. Composition	/Information	on Ingredie	nts
CAS RTE		Hazardous Comp REACH Registrat	oonents (Chemical Name)/ ion No.	Concentration	EC No./ EC Index No.	GHS Classification
NA NA	ļ	Autotaxin (human re	combinant)	0.0 -1.0 %	NA NA	No data available.
NA		Glycerol		0.0 -20.0 %	200-289-5	No data available.
56	-81-5 0 50000	_ ,			NA	

Multi-region format



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Autotaxin	(human	recombinant)	Assay	Reagent
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77- TY290	86-1)0000	Trizma base		0.0 -5.0 %	201-064-4 NA	Skin Corr. 2: H315 Eye Damage 2: H319 STOT (SE) 3: H335
7732 ZC011	2-18-5 10000	Water		69.0 -100.0 %	231-791-2 NA	No data available.
		•		•	•	
			Section 4. Fi	rst Ald Measu	lres	
4.1	Descrip Measur	otion of First Aid es:				
	In Case	of Inhalation:	Remove to fresh air. If not bro Get immediate medical attent		l respiration or gi	ve oxygen by trained personnel.
	In Case	of Skin Contact:	Immediately wash skin with s clothing. Get medical attention			5 minutes. Remove contaminated before reuse.
	In Case	of Eye Contact:	Hold eyelids apart and flush e and tested by medical persor		ater for at least 1	5 minutes. Have eyes examined
	In Case	of Ingestion:	Wash out mouth with water p unconscious person. Get me medical personnel.	-	-	ive anything by mouth to an ng unless directed to do so by
4.2	Importa	ant Symptoms and	Prolonged exposure may cau	ise nausea, headach	ne, and vomiting.	
	Effects	, Both Acute and				
	Delayed	d:				
			Section 5. Fire	Fighting Mea	asures	
5.1	Suitable	e Extinguishing	Use alcohol-resistant foam, o	carbon dioxide, wate	r, or dry chemica	l spray.
	Media:		Use water spray to cool fire-e	exposed containers.		
	Unsuita	able Extinguishing	A solid water stream may be	inefficient.		
	Media:					
5.2	Flamma	able Properties an	dEmits toxic fumes under fire	conditions.		
	Hazard	S:				
	Flash P		No data.			
	-	ve Limits:	LEL: No data.	UEL: No da	ata.	
	-	nition Pt:	No data.			
5.3	Fire Fig	hting Instructions	: As in any fire, wear self-cont equivalent), and full protectiv		-	
			Section 6. Accider	ntal Release N	Measures	
6.1 6.2	Protect	ency Procedures: Imental	Avoid breathing vapors and d As conditions warrant, wear and appropriate personal pro Take steps to avoid release	a NIOSH approved otection (rubber boo	self-contained brots, safety goggles	
6.3			Contain spill and collect, as	appropriate		
0.3			gTransfer to a chemical waste		sal in accordance	e with local regulations.



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Section 7. Handling and Storage

- 7.1 Precautions To Be Taken Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure. in Handling: 7.2 Precautions To Be Taken Keep container tightly closed.
- Store in accordance with information listed on the product insert. in Storing:

Section 8. Exposure Controls/Personal Protection

8.1 **Exposure Parameters:**

CAS #	Partial Chemical Name	Britain EH40	France VL	Europe
NA	Autotaxin (human recombinant)	No data.	No data.	No data.
56-81-5	Glycerol	TWA: 10 mg/m3 () STEL: ()	TWA: 10 mg/m3	No data.
7647-14-5	Sodium chloride	No data.	No data.	No data.
77-86-1	Trizma base	No data.	No data.	No data.
7732-18-5	Water	No data.	No data.	No data.
CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
NA				
	Autotaxin (human recombinant)	No data.	No data.	No data.
56-81-5	Autotaxin (human recombinant) Glycerol	No data. PEL: 15 (dust); 5 (resp.) mg/m3	TLV: 10 mg/m3	No data.
	,	PEL: 15 (dust); 5 (resp.)		
56-81-5	Glycerol	PEL: 15 (dust); 5 (resp.) mg/m3	TLV: 10 mg/m3	No data.
56-81-5 7647-14-5	Glycerol Sodium chloride	PEL: 15 (dust); 5 (resp.) mg/m3 No data.	TLV: 10 mg/m3 No data.	No data. No data.

8.2 **Exposure Controls:**

8.2.1 **Engineering Controls** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne (Ventilation etc.): levels below recommended exposure limits.

8.2.2 Personal protection equipment:

Eye Protection: Safety glasses

Protective Gloves: Compatible chemical-resistant gloves

Other Protective Clothing: Lab coat

NIOSH approved respirator, as conditions warrant. **Respiratory Equipment**

(Specify Type):

Work/Hygienic/Maintenan Do not take internally.

ce Practices:

Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower. Wash thoroughly after handling.

No data available.



SAFETY DATA SHEET Autotaxin (human recombinant) Assay Reagent

					and Chemical	ropenties			
9.1		-		chemical Propertie					
	-	al States:	-] Gas [X] Liqu	id [] Solid				
		ance and Odor:		blution					
	pH: Malting	Deint		.0					
	Melting			o data.					
	Boiling			o data. o data.					
	Flash P			o data. o data.					
	=	ation Rate: ability (solid, gas)		o data. o data available.					
		ve Limits:		EL: No data.		No data.			
	-	Pressure (vs. Air		o data.	OLL.	10 0010.			
	Hg):			, uuu.					
		Density (vs. Air =	1): No	o data.					
	-	c Gravity (Water :	-	o data.					
	-	ty in Water:	-	o data.					
		nition Pt:		o data.					
0.2	•	formation	INC						
9.2		tormation	No	o data.					
	reicent	volatlië.							
			Sec	tion 10. Stal	pility and Read	ctivity			
10.1	Reactiv	ity:	No data av	vailable.					
10.2	Stability		Unstable [
10.3	Stability	y Note(s):	Stable if s	tored in accordance	e with information list	ed on the produc	insert.		
	Polyme	rization:	Will occur	[] Will not oc	cur [X]				
10.4	Condition	ons To Avoid:	No data av	vailable.					
10.5	Incomp	atibility - Materia	Is strong bas	ses					
	To Avoi	id:	strong oxi	dizing agents					
10.6	Hazardo	ous	carbon dic						
		position or	carbon mo	onoxide					
	Byprod	ucts:							
			Secti	ion 11. Toxic	cological Inform	mation			
11.1	Informa	tion on	The toxico	ological effects of th	is product have not b	een thoroughly s	tudied.		
	Toxicol	ogical Effects:	Glycerol -	Irritation Data: Eye	es (rabbit): 500 mg (24	4h) mild; Skin (ral	obit): 500 mg (2	24h) mild;	
	Chronic	: Toxicological	Glycerol -	Investigated as a r	nutagen, reproductive	e effector, and tur	norigen.		
	Effects:	:	Only selec	Glycerol - Investigated as a mutagen, reproductive effector, and tumorigen. Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here.					
			See actua	I entry in RTECS fo	or complete information	on.			
			Glycerol R	RTECS Number: M	48050000				
Carcir	nogenicit	y:	NTP? No	IARC Monogr	aphs? No OSHA	Regulated? No			
CAS	#	Hazardous Cor	mponents (C	Chemical Name)	NTP	IARC	ACGIH	OSHA	
	NA	Autotaxin (huma	an recombina	ant)	n.a.	n.a.	n.a.	n.a.	
56	-81-5	Glycerol			n.a.	n.a.	n.a.	n.a.	
764	7-14-5	Sodium chloride)		n.a.	n.a.	n.a.	n.a.	
77	-86-1	Trizma base			n.a.	n.a.	n.a.	n.a.	
	2-18-5	Water			n.a.				



SAFETY DATA SHEET Autotaxin (human recombinant) Assay Reagent

				1	
		Section 12. Ecolo	ogical Informa	ation	
12.1 Toxici	ity:	Avoid release into the environm	nent.		
		Runoff from fire control or diluti	on water may cause	pollution.	
12.2 Persis	stence and	No data available.			
Degra	dability:				
	cumulative	No data available.			
Poten					
	ity in Soil:	No data available.			
	ts of PBT and vPvB	No data available.			
	sment:	No data available			
12.6 Other	adverse effects:	No data available.		_	
		Section 13. Dispo			
13.1 Waste	Disposal Method:	Dispose in accordance with loc		-	
		Section 14. Trar	sport Information	ation	
14.1 LAND	TRANSPORT (US	DOT):			
	per Shipping Name	Not dangerous goods.			
	ard Class:				
UN/NA N					
	TRANSPORT (Euro				
	Shipping Name:	Not dangerous goods.			
UN Numl Hazard C					
	RANSPORT (ICAO/	IATA).			
	TA Shipping Name:	Not dangerous goods.			
Additional T		Transport in accordance with lo	ocal state and fede	ral regulations	
Information:					
		Section 15. Regu	latory Inform	ation	
	Cupating Amanda	· ·			
CAS #		nents and Reauthorization Act ponents (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
NA	Autotaxin (humar	· · · ·	No	No	No
56-81-5	Glycerol		No	No	No
7647-14-5	Sodium chloride		No	No	No
77-86-1	Trizma base		No	No	Yes-Cat. N106
7732-18-5	Water		No	No	No
CAS #	Hazardous Com	ponents (Chemical Name)	Other US EPA o	r Stato Lists	
NA	Autotaxin (humar	· · · ·			: No; TSCA: No; CA
NA		recombinant)	PROP.65: No		. NO, TOOA. NO, OA
56-81-5	Glycerol		CAA HAP,ODC: Inventory; CA P		: No; TSCA: Yes -
7647-14-5	Sodium chloride		CAA HAP,ODC: Inventory; CA P		: No; TSCA: Yes -
77-86-1	Trizma base		CAA HAP,ODC: Inventory; CA P		S: No; TSCA: Yes -
			·		Multi-region forma



Page: 6 of 6

Autotaxin (human recombinant) Assay Reagent

CHEMICAL			
7732-18-5	Water		CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
Regulatory Info Statement:	ormation	This SDS was prepared in accor No.1272/2008.	rdance with 29 CFR 1910.1200 and Regulation (EC)
		Section 16. Oth	er Information
Revision Date:		05/12/2015	
Additional Info	rmation About	No data available.	
Company Polic	cy or Disclaimer:	currently available to us. Howeve express or implied, with respect	s believed to be accurate and represents the best information er, we make no warranty of merchantability or any other warranty, to such information, and we assume no liability resulting from its wn investigations to determine the suitability of the information for



SAFETY DATA SHEET Autotaxin Substrate

			cording to Regulation (EC) No. 190			
		Section 1.	Identification of the Substar	nce/Mixture and of	f the Company/U	ndertaking
.1	Product	Code:	700583			
	Product	Name:	Autotaxin Substrate			
.2	Relevan	t identified uses	of the substance or mixture a	and uses advised a	against:	
	Releva	ant identified use	s: For research use only, ne	ot for human or vete	erinary use.	
1.3	Details o	of the Supplier of	the Safety Data Sheet:			
	Compa	any Name:	Cayman Chemical Comp 1180 E. Ellsworth Rd. Ann Arbor, MI 48108	bany		
	Web s	ite address:	www.caymanchem.com			
	Inform	ation:	Cayman Chemical Comp	bany	+1 (73	4)971-3335
1.4	Emerge	ncy telephone nu	imber:			
	Emerg	ency Contact:	CHEMTREC Within USA CHEMTREC Outside US			0)424-9300 3)527-3887
			Section 2. Haz	zards Identifi	ication	
2.1	Classifi					
	Classing	cation of the Sub	stance or Mixture:			
2.1.1			stance or Mixture: to Regulation (EC) No 1272/2	2008 [CLP]:		
	Classifi			2008 [CLP]:		
2.2	Classifi Label El	cation according ements:				
2.1.1 2.2 2.2.1	Classifi Label El Labelin	cation according ements:	to Regulation (EC) No 1272/2			
2.2	Classifi Label El Labelin GHS S	cation according ements: g according to R	to Regulation (EC) No 1272/2 egulation (EC) No 1272/2008			
2.2	Classifi Label El Labelin GHS S GHS H	cation according ements: g according to R ignal Word: lazard Phrases:	to Regulation (EC) No 1272/2 egulation (EC) No 1272/2008	[CLP]:	s not classifiable ac	ccording to GHS.
2.2	Classifi Label El Labelin GHS S GHS H Based	cation according ements: g according to R ignal Word: lazard Phrases:	to Regulation (EC) No 1272/2 egulation (EC) No 1272/2008 None	[CLP]:	s not classifiable ac	ccording to GHS.
2.2	Classifi Label El Labelin GHS S GHS H Based GHS F	cation according ements: g according to R signal Word: Hazard Phrases: on evaluation of c	to Regulation (EC) No 1272/2 egulation (EC) No 1272/2008 None	[CLP]:	s not classifiable ac	ccording to GHS.
2.2	Classifi Label El Labelin GHS S GHS F Based GHS F No phr	cation according ements: g according to R ignal Word: lazard Phrases: on evaluation of o Precaution Phras	to Regulation (EC) No 1272/2 egulation (EC) No 1272/2008 None currently available data this sub	[CLP]:	s not classifiable ac	ccording to GHS.
2.2	Classifi Label El Labelin GHS S GHS H Based GHS F No phr GHS F	cation according ements: g according to R signal Word: Hazard Phrases: on evaluation of c Precaution Phras	to Regulation (EC) No 1272/2 egulation (EC) No 1272/2008 None currently available data this sub	[CLP]:	s not classifiable ac	ccording to GHS.
2.2	Classifi Label El Labelin GHS S GHS H Based GHS F No phi GHS F	cation according ements: g according to R Fignal Word: Hazard Phrases: on evaluation of or Precaution Phrase rases apply. Response Phrase rases apply. Storage and Disp	egulation (EC) No 1272/2 egulation (EC) No 1272/2008 None currently available data this sub es: osal Phrases:	[CLP]: stance or mixture is		ccording to GHS.
2.2 2.2.1	Classifi Label El Labelin GHS S GHS H Based GHS F No phi GHS F No phi GHS S Please	cation according ements: g according to R signal Word: Hazard Phrases: on evaluation of o Precaution Phrase rases apply. Response Phrase rases apply. Storage and Disp e refer to Section 7	egulation (EC) No 1272/2 egulation (EC) No 1272/2008 None currently available data this sub es: osal Phrases: 7 for Storage and Section 13 for	[CLP]: stance or mixture is	on.	
2.2	Classifi Label El Labelin GHS S GHS H Based GHS F No phi GHS S Please Adverse	cation according ements: g according to R signal Word: Hazard Phrases: on evaluation of o Precaution Phrase rases apply. Response Phrase rases apply. Storage and Disp e refer to Section 7 e Human Health	egulation (EC) No 1272/2 egulation (EC) No 1272/2008 None currently available data this sub es: s: osal Phrases: 7 for Storage and Section 13 for Material may be irritating to t	[CLP]: stance or mixture is r Disposal information he mucous membra	on. anes and upper res	
2.2 2.2.1	Classifi Label El Labelin GHS S GHS H Based GHS F No phi GHS S Please Adverse	cation according ements: g according to R signal Word: Hazard Phrases: on evaluation of o Precaution Phrase rases apply. Response Phrase rases apply. Storage and Disp e refer to Section 7	egulation (EC) No 1272/2 egulation (EC) No 1272/2008 None currently available data this sub es: osal Phrases: 7 for Storage and Section 13 for Material may be irritating to t May be harmful by inhalation	[CLP]: stance or mixture is Disposal information he mucous membra n, ingestion, or skin	on. anes and upper res absorption.	
2.2 2.2.1	Classifi Label El Labelin GHS S GHS H Based GHS F No phi GHS S Please Adverse	cation according ements: g according to R signal Word: Hazard Phrases: on evaluation of o Precaution Phrase rases apply. Response Phrase rases apply. Storage and Disp e refer to Section 7 e Human Health	egulation (EC) No 1272/2 egulation (EC) No 1272/2008 None currently available data this sub es: ss: osal Phrases: 7 for Storage and Section 13 for Material may be irritating to t May be harmful by inhalation May cause eye, skin, or resp	[CLP]: stance or mixture is r Disposal information he mucous membra n, ingestion, or skin piratory system irrita	on. anes and upper res absorption. tion.	spiratory tract.
2.2 2.2.1	Classifi Label El Labelin GHS S GHS H Based GHS F No phi GHS S Please Adverse	cation according ements: g according to R signal Word: Hazard Phrases: on evaluation of o Precaution Phrase rases apply. Response Phrase rases apply. Storage and Disp e refer to Section 7 e Human Health and Symptoms:	egulation (EC) No 1272/2 egulation (EC) No 1272/2008 None currently available data this sub es: ss: osal Phrases: 7 for Storage and Section 13 for Material may be irritating to t May be harmful by inhalation May cause eye, skin, or resp	[CLP]: stance or mixture is n Disposal information he mucous membra n, ingestion, or skin piratory system irrita e, the toxicological p	on. anes and upper res absorption. tion. properties have not	spiratory tract. t been thoroughly investigated
2.2 2.2.1 2.3	Classifi Label El Labelin GHS S GHS H Based GHS F No phr GHS S Please Adverse Effects	cation according ements: g according to R signal Word: Hazard Phrases: on evaluation of o Precaution Phrase rases apply. Response Phrase rases apply. Storage and Disp e refer to Section 7 e Human Health and Symptoms:	egulation (EC) No 1272/2 egulation (EC) No 1272/2008 None currently available data this sub es: s: osal Phrases: for Storage and Section 13 for Material may be irritating to t May be harmful by inhalation May cause eye, skin, or resp To the best of our knowledge stion 3. Composition	[CLP]: stance or mixture is r Disposal informatio he mucous membra n, ingestion, or skin piratory system irrita e, the toxicological p /Information	on. anes and upper res absorption. tion. properties have not on Ingredie	spiratory tract. t been thoroughly investigated nts
2.2 2.2.1 2.3 CAS	Classifi Label El Labelin GHS S GHS H Based GHS F No phr GHS S Please Adverse Effects	cation according ements: g according to R signal Word: Hazard Phrases: on evaluation of o Precaution Phrase rases apply. Response Phrase rases apply. Storage and Disp e refer to Section 7 e Human Health and Symptoms:	egulation (EC) No 1272/2 egulation (EC) No 1272/2008 None currently available data this sub es: s: osal Phrases: for Storage and Section 13 for Material may be irritating to t May be harmful by inhalation May cause eye, skin, or resp To the best of our knowledge ction 3. Composition	[CLP]: stance or mixture is n Disposal information he mucous membra n, ingestion, or skin piratory system irrita e, the toxicological p	on. anes and upper res absorption. tion. properties have not	spiratory tract. t been thoroughly investigated
2.2 2.2.1 2.3 CAS RTEC	Classifi Label El Labelin GHS S GHS H Based GHS F No phr GHS S Please Adverse Effects	cation according ements: g according to R signal Word: Hazard Phrases: on evaluation of o Precaution Phrase rases apply. Storage and Disp e refer to Section 7 e Human Health and Symptoms: Sec Hazardous Com	egulation (EC) No 1272/2 egulation (EC) No 1272/2008 None currently available data this sub es: s: osal Phrases: for Storage and Section 13 for Material may be irritating to t May be harmful by inhalation May cause eye, skin, or resp To the best of our knowledge ction 3. Composition ponents (Chemical Name)/ ation No.	[CLP]: stance or mixture is r Disposal informatio he mucous membra n, ingestion, or skin piratory system irrita e, the toxicological p /Information	on. anes and upper res absorption. tion. properties have not ON INGREDIE	spiratory tract. t been thoroughly investigated nts



			Section	4. First Aid Me	easures			
4.1	Descrip	otion of First Aid						
	Measur	es:						
	In Case	of Inhalation:	Remove to fresh air. I Get immediate medic		rtificial respiration or give oxyg	en by trained personnel.		
	In Case	of Skin Contact:	-		of water for at least 15 minute			
	In Case	of Eye Contact:	Hold eyelids apart an and tested by medica		y of water for at least 15 minut	es. Have eyes examined		
	In Case	of Ingestion:	Wash out mouth with	water provided persor	n is conscious. Never give any Do NOT induce vomiting unle			
			Section 5.	Fire Fighting	Measures			
5.1	Suitable	e Extinguishing	Use alcohol-resistant	foam, carbon dioxide	water, or dry chemical spray.			
	Media:		Use water spray to co	ool fire-exposed conta	ners.			
		Unsuitable Extinguishing A solid water stream may be inefficient.						
_	Media:		151 1 4 1 1					
5.2	Hazard	-	d No data available.					
	Flash P	Pt:	No data.					
	Explosi	ive Limits:	LEL: No data.	UEL:	No data.			
	-	nition Pt:	No data.					
5.3	Fire Fig	hting Instructions	As in any fire, wear s	elf-contained breathin	g apparatus pressure-demand	(NIOSH approved or		
	_	-	equivalent), and full p	protective gear to preve	ent contact with skin and eyes.			
			Section 6. Ac	cidental Relea	se Measures			
6.1	Protect	ive Precautions,	Avoid breathing vapo	ors and provide adequ	ate ventilation.			
	Protect	ive Equipment and			oved self-contained breathing			
	Emerge	ency Procedures:			er boots, safety goggles, and h	eavy rubber gloves).		
6.2		nmental	Take steps to avoid	release into the enviro	nment, if safe to do so.			
	Precau							
6.3 Methods and Material For Contain spill and collect, as appropriate.								
	Containment and CleaningTransfer to a chemical waste container for disposal in accordance with local regulations. Up:							
			Section 7.	Handling and	Storage			
7.1	Precautions To Be Taken Avoid breathing dust/fume/gas/mist/vapours/spray. in Handling: Avoid prolonged or repeated exposure.							
7.2	in Handling: Avoid prolonged or repeated exposure. Precautions To Be Taken Keep container tightly closed.							
1.2	in Stori			with information listed	on the product insert.			
		-			ersonal Protection			
8.1	Exposu	re Parameters:	uon 0. Exp030					
CAS		Partial Chemical	Name	Britain EH40	France VL	Europe		
	3-96-3		phenyl) phosphate	No data.	No data.	No data.		
		+		ļ	<u> </u>	I		
						Multi-region format		



CAS #	#	Partial Chemical Name		OSHA TWA	ACGIH TWA	Other Limits		
		sodium bis(4-nitrophenyl) phosphate		No data.	No data.	No data.		
4043 8.2			phenyi) phosphate		ino dala.			
o.z 8.2.1	Exposure Controls: Engineering Controls Use process enclosures, local exhaust ventilation, or other engineering controls to control air					controla to control airbor		
0.2.1	-	-	Use process enclosures, local exhaust ventilation, or other engineering controls to control airbor					
8.2.2	(Ventilation etc.): Personal protection equip		levels below recommended exposure limits.					
0.2.2	Eye Prot							
	-		Safety glasses	l registent devec				
	Protective Gloves:		Compatible chemical-resistant gloves					
	Other Protective Clothing							
	Respiratory Equipment		NIOSH approved respirator, as conditions warrant.					
	(Specify Type):							
	Work/Hygienic/Maintenan Do not take internally.							
	ce Practices:		Facilities storing or utilizing this material should be equipped with an eyewash facility and a safet					
			shower. Wash thoroughly after	er bandling				
			No data available.	er nandling.				
		S	ection 9. Phys	sical and Chei	mical Properties			
9.1	Informati	on on Basic Phy	sical and Chemical F	-				
	Physical	States:	[] Gas [[] Liquid [X] Sol	lid			
	Appeara	nce and Odor:	A lyophilized	powder				
	Melting I	Point:	No data.					
	Boiling F	Point:	No data.					
	Flash Pt	:	No data.					
	Evapora	tion Rate:	No data.					
	Flammal	bility (solid, gas):	No data avail	lable.				
	-	e Limits:	LEL: No data	a.	UEL: No data.			
	-	ressure (vs. Air o	or mm No data.					
	Hg):							
	-	ensity (vs. Air = 1	-					
	•	Gravity (Water =	1): No data.					
	Solubilit	y in Water:	No data.					
	Autoigni	tion Pt:	No data.					
9.2	Other Inf	ormation						
	Percent	Volatile:	No data.					
			Section 10). Stability and	Reactivity			
10.1	Reactivit	tv:	No data available.					
10.2	Stability	-	Unstable [] Sta	able [X]				
10.3	Stability				ation listed on the product inse	ert.		
	Polymer			/ill not occur [X]				
10.4	-	ns To Avoid:	No data available.	-				
10.5			s strong oxidizing age	nts				
	To Avoid	-						
	Hazardo		carbon dioxide					
10.6								
10.6	Decomn	osition or	carbon monoxide					
10.6	Decomp Byprodu		carbon monoxide nitrogen oxides					



Multi-region format

	•	osphorus oxides Jium oxides				
		Section 11. Toxic	ological Inform	nation		
1.1 Inforn					udied	
	blogical Effects:	e toxicological effects of thi	s product have not be	en morougnly st		
CAS #	_	ents (Chemical Name)	NTP	IARC	ACGIH	OSHA
4043-96-3	sodium bis(4-nitrophe		n.a.	n.a.	n.a.	n.a.
4043-90-3					11.a.	11.a.
		Section 12. Ecol	ogical Informa	ation		
12.1 Toxic	-	bid release into the environ		н. е		
		noff from fire control or dilu	tion water may cause	e pollution.		
		data available.				
-	dability:	data available				
12.3 Bioac Poten		data available.				
		data available.				
	ts of PBT and vPvB No					
	sment:	שנים מימוומטוה.				
		data available.				
				otione		
		Section 13. Dispo				
13.1 Waste	Disposal Method: Dis	pose in accordance with lo		-		
		Section 14. Tra	nsport Inform	ation		
14.1 LANE	TRANSPORT (US DOT):				
DOT Pro	per Shipping Name:	Not dangerous goods.				
DOT Haz	ard Class:					
UN/NA N	umber:					
14.1 LANE	TRANSPORT (Europea	an ADR/RID):				
ADR/RID	Shipping Name:	Not dangerous goods.				
UN Num						
Hazard C						
	RANSPORT (ICAO/IATA	-				
	A Shipping Name:	Not dangerous goods.				
Additional T Information:	•	ansport in accordance with	local, state, and fede	ral regulations.		
Information:						
		Section 15. Reg	ulatory Inform	ation		
EPA SARA (1	s and Reauthorization Ac	-			
CAS #		ents (Chemical Name)	S. 302 (EHS)	S. 304 RQ		8 (TRI)
	sodium bis(4-nitrophe	enyl) phosphate	No	No	No	
4043-96-3	Hazardous Components (Chemical Name)		Other US EPA or State Lists CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA			
	Hazardous Compon sodium bis(4-nitrophe					



Regulatory Information	This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC)					
Statement:	No.1272/2008.					
Section 16. Other Information						
Revision Date:	05/12/2015					
Additional Information About	No data available.					
This Product:						
	No data available. DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.					