

Agilent Technologies

Kit Name: α(1-2,3,4,6) Fucosidase (bovine kidney)

Kit PN: GKX-5006

This product is a multi-level kit, composed of the following modules and individual chemical components:

Kit Components

Kit Component Part Number	Kit Component Name	Qty
GKX-5006	α (1-2,3,4,6) Fucosidase (bovine kidney), 0.5 Unit	1 vial
WS0122	5x Reaction Buffer, 1 ml	1 vial

SDSs for each component follow this cover sheet.

Transportation Information for the Kit:

Proper Shipping Names:

DOT	ΙΑΤΑ/ΙCΑΟ	China
Not Regulated	Not Regulated	Not Regulated



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Issue Date: 02/12/2019

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1 Identification

- [•] Product identifier
- Product name: α(1-2,3,4,6) Fucosidase (bovine kidney)
- · Product Code: GKX-5006
- · Application of the substance / the mixture Reagents and Standards for Analytical Chemical Laboratory Use
- Details of the supplier of the safety data sheet
- Manufacturer/Supplier: Agilent Technologies 5301 Stevens Creek Blvd Santa Clara, CA 95051, USA
- Email: pdl-msds author@agilent.com
- Phone number: 800-227-9770
- Emergency telephone number: CHEMTREC®: 1-800-424-9300

2 Hazard(s) identification

• Classification of the substance or mixture

The product is not classified, according to the Globally Harmonized System (GHS).

- · Label elements
- · GHS label elements Void
- · Hazard pictograms Void
- · Signal word Void
- · Hazard statements Void
- · Precautionary statements
- Avoid breathing dust/fume/gas/mist/vapors/spray
- Wash thoroughly after handling.
- Avoid release to the environment.

Wear protective gloves/protective clothing/eye protection/face protection.

If swallowed: Call a doctor if you feel unwell.

If swallowed: Rinse mouth. Do NOT induce vomiting.

If on skin: Wash with plenty of soap and water.

If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Collect spillage.

Store in accordance with local/regional/national/international regulations.

Store in a well-ventilated place. Keep cool.

Store away from other materials.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:

NFPA ratings (scale 0 - 4)



• HMIS-ratings (scale 0 - 4)

HEALTH*0FIRE0Fire = 0REACTIVITYO

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6.1%

[·] Other hazards

- Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.

[•] Dangerous components:

77-92-9 citric acid

4 First-aid measures

[•] Description of first aid measures

- General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Wear protective gloves / eye protection / face protection.
- Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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Protective Action Criteria for Chemicals

· PAC-1:

None of the ingredients is listed.

PAC-2:

None of the ingredients is listed.

PAC-3:

None of the ingredients is listed.

7 Handling and storage

· Handling:

- · Precautions for safe handling Wear protective gloves / eye protection / face protection.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- Storage:
- · Requirements to be met by storerooms and receptacles: No special requirements.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: None.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- Control parameters

Components with limit values that require monitoring at the workplace:

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit. The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the remaining constituent has no known exposure limits.

At this time, the other constituents have no known exposure limits.

Additional information: The lists that were valid during the creation were used as basis.

• Exposure controls

- Personal protective equipment:
- General protective and hygienic measures: The usual precautionary measures for handling chemicals should be followed.
- · Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- · Material of gloves Wear suitable gloves.
- Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed. **Eye protection:** Wear eye protection / face protection.

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Physical and chemical prope	erties
Information on basic physical and	chemical properties
General Information	
· Appearance:	
Form:	Powder
Color:	Whitish
· Odor: · Odor threshold:	Characteristic Not determined.
pH-value at 20 °C (68 °F):	6
	0
Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
Flash point:	Not applicable.
Flammability (solid, gaseous):	Not applicable.
Ignition temperature:	1,010 °C (1,850 °F)
Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure:	Not determined.
Density at 20 °C (68 °F):	1.32986 g/cm³ (11.09768 lbs/gal)
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Fully miscible.
Partition coefficient (n-octanol/wat	ter): Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Solvent content:	
VOC content:	0.00 %
Solids content:	60.8 %
Other information	No further relevant information available.

10 Stability and reactivity

· Reactivity No further relevant information available.

Chemical stability

• Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

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- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- Information on toxicological effects
- Acute toxicity:
- · Primary irritant effect:
- on the skin: May be harmful in contact with skin.
- on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.
- [•]Additional toxicological information:

The product is not subject to classification according to internally approved calculation methods for preparations: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

• NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- Additional ecological information:
- General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · **vPvB:** Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

· Waste treatment methods

• **Recommendation:** Dispose of contents/container in accordance with local/regional/national/international regulations.

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· Uncleaned packagings:

• **Recommendation:** Disposal must be made according to official regulations.

• Recommended cleansing agent: Water, if necessary with cleansing agents.

UN-Number		
DOT, ADN, IMDG, IATA	not regulated	
UN proper shipping name DOT, ADN, IMDG, IATA	not regulated	
Transport hazard class(es)		
DOT, ADN, IMDG, IATA Class	not regulated	
Packing group DOT, IMDG, IATA	not regulated	
Environmental hazards:	Not applicable.	
Special precautions for user	Not applicable.	
Transport in bulk according to Annex MARPOL73/78 and the IBC Code	x II of Not applicable.	
UN "Model Regulation":	not regulated	-

15 Regulatory information

 $^{\cdot}$ Safety, health and environmental regulations/legislation specific for the substance or mixture $^{\cdot}$ Sara

· Section 35	55 (extremely hazardous substances):	
None of the	e ingredients is listed.	
· Section 31	13 (Specific toxic chemical listings):	
None of the	e ingredients is listed.	
· TSCA (To	xic Substances Control Act):	
9048-46-8	Albumins, blood serum	
7558-79-4	disodium hydrogenorthophosphate	
	citric acid	
· Propositio	n 65	
· Chemicals	s known to cause cancer:	
None of the	e ingredients is listed.	
· Chemicals	s known to cause reproductive toxicity for females:	
None of the	e ingredients is listed.	
Chemicals	s known to cause reproductive toxicity for males:	
None of the	e ingredients is listed.	
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known to cause developmental toxicity: e ingredients is listed. mic categories ronmental Protection Agency) e ingredients is listed. shold Limit Value established by ACGIH) e ingredients is listed. (National Institute for Occupational Safety and Health)	
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e ingredients is listed.	
(National Institute for Occupational Safety and Health)	
e ingredients is listed.	
elements Void	
ctograms Void	
rd Void	
atements Void	
nary statements	
thing dust/fume/gas/mist/vapors/spray	
bughly after handling.	
ase to the environment.	
ective gloves/protective clothing/eye protection/face protection.	
d: Call a doctor if you feel unwell.	
d: Rinse mouth. Do NOT induce vomiting.	
Wash with plenty of soap and water.	
If breathing is difficult, remove person to fresh air and keep comfortable fo	or breathing.
Rinse cautiously with water for several minutes. Remove contact lenses, if	f present and easy to do. Continue rinsing
lage.	
cordance with local/regional/national/international regulations.	
vell-ventilated place. Keep cool.	
r from other materials.	
contents/container in accordance with local/regional/national/internationa	l regulations.
safety assessment: A Chemical Safety Assessment has not been ca	urried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.



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1 Identification

- Product identifier
- Product name: 5x Reaction Buffer
- Product Code: WS0122
- · Application of the substance / the mixture Reagents and Standards for Analytical Chemical Laboratory Use
- Details of the supplier of the safety data sheet
- Manufacturer/Supplier: Agilent Technologies 5301 Stevens Creek Blvd Santa Clara, CA 95051, USA
- · Issuing Department: Agilent Quality Assurance
- Email: pdl-msds author@agilent.com
- · Phone number: 800-227-9770
- Emergency telephone number: CHEMTREC®: 1-800-424-9300

2 Hazard(s) identification

Classification of the substance or mixture

The product is not classified, according to the Globally Harmonized System (GHS).

- Label elements
- · GHS label elements Void
- · Hazard pictograms Void
- · Signal word Void
- · Hazard statements Void
- · Precautionary statements
- Do not breathe mist/vapours/spray.

Wear protective gloves/protective clothing/eye protection/face protection.

If swallowed: Call a doctor if you feel unwell.

If on skin: Wash with plenty of soap and water.

IF INHALED: Call a doctor if you feel unwell.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:

• NFPA ratings (scale 0 - 4)



HMIS-ratings (scale 0 - 4)

HEALTHImage: 0FIREImage: 0REACTIVITYImage: 0Reactivity = 0

Other hazards

- [•] Results of PBT and vPvB assessment
- · PBT: Not applicable.

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· vPvB: Not applicable.

3 Composition/information on ingredients

- [•] Chemical characterization: Mixtures
- Description: Mixture of the substances listed below with nonhazardous additions.
- · Dangerous components: Void

4 First-aid measures

- [•] Description of first aid measures
- · General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- [•] Information for doctor:
- Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- Protective equipment: No special measures required.

6 Accidental release measures

Wear protective gloves / eye protection / face protection.	
Environmental precautions: Dilute with plenty of water.	
Do not allow to enter sewers/ surface or ground water.	
Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).	
Reference to other sections	
See Section 7 for information on safe handling.	
See Section 8 for information on personal protection equipment.	
See Section 13 for disposal information.	
Protective Action Criteria for Chemicals	
PAC-1:	
18996-35-5 sodium dihydrogen citrate	4 mg/n
PAC-2:	
18996-35-5 sodium dihydrogen citrate	44 mg/n
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270 ma/m³

· PAC-3:

18996-35-5 sodium dihydrogen citrate

7 Handling and storage

• Handling:

- · Precautions for safe handling Wear protective gloves / eye protection / face protection.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- Storage:
- · Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- Further information about storage conditions: None.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

· Additional information about design of technical systems: No further data; see item 7.

- · Control parameters
- Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace. **Additional information:** The lists that were valid during the creation were used as basis.

- Exposure controls
- Personal protective equipment:

General protective and hygienic measures: The usual precautionary measures for handling chemicals should be followed.

- Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

- Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- · Material of gloves Wear suitable gloves.
- Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Wear eye protection / face protection.

Information on basic physical an General Information	d chemical properties	
Appearance:	l invited	
Form:	Liquid	
Color:	Colorless	
Odor:	Characteristic	
Odor threshold:	Not determined.	
pH-value at 20 °C (68 °F):	6	
Change in condition		
Melting point/Melting range:	Undetermined.	

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Boiling point/Boiling range:	100 °C (212 °F)	
Flash point:	Not applicable.	
Flammability (solid, gaseous):	Not applicable.	
Decomposition temperature:	Not determined.	
Auto igniting:	Product is not selfigniting.	
Danger of explosion:	Product does not present an explosion hazard.	
Explosion limits: Lower: Upper:	Not determined. Not determined.	
Vapor pressure at 20 °C (68 °F):	23 hPa (17.3 mm Hg)	
Density: Relative density Vapor density Evaporation rate	Not determined. Not determined. Not determined. Not determined.	
Solubility in / Miscibility with Water:	Fully miscible.	
Partition coefficient (n-octanol/wate	er): Not determined.	
Viscosity: Dynamic: Kinematic:	Not determined. Not determined.	
Solvent content: Water: VOC content:	94.3 % 0.00 %	
Solids content: Other information	6.0 % No further relevant information available.	

10 Stability and reactivity

· Reactivity No further relevant information available.

- [•] Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- Information on toxicological effects
- Acute toxicity:
- · Primary irritant effect:
- \cdot on the skin: May be harmful in contact with skin.
- on the eye: No irritating effect.

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· Sensitization: No sensitizing effects known.

• Additional toxicological information:

The product is not subject to classification according to internally approved calculation methods for preparations: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

· Toxicity

- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- Additional ecological information:
- General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Results of PBT and vPvB assessment

- · **PBT:** Not applicable.
- · **vPvB:** Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- Recommendation: Dispose of contents/container in accordance with local/regional/national/international regulations.
- Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

- · UN-Number
- [·] DOT, ADN, IMDG, IATA

not regulated

not regulated

UN proper shipping name

[·] DOT, ADN, IMDG, IATA

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Transport hazard class(es)		
· DOT, ADN, IMDG, IATA · Class	not regulated	
 Packing group DOT, IMDG, IATA 	not regulated	
· Environmental hazards:	Not applicable.	
· Special precautions for user	Not applicable.	
 Transport in bulk according to Annex MARPOL73/78 and the IBC Code 	t II of Not applicable.	
UN "Model Regulation":	not regulated	

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture • Sara

· Section 355 (extremely hazardous substances):	
None of the ingredients is listed.	
· Section 313 (Specific toxic chemical listings):	
None of the ingredients is listed.	
• TSCA (Toxic Substances Control Act):	
All ingredients are listed.	
· Proposition 65	
· Chemicals known to cause cancer:	
None of the ingredients is listed.	
· Chemicals known to cause reproductive toxicity for females:	
None of the ingredients is listed.	
· Chemicals known to cause reproductive toxicity for males:	
None of the ingredients is listed.	
· Chemicals known to cause developmental toxicity:	
None of the ingredients is listed.	
· Carcinogenic categories	
· EPA (Environmental Protection Agency)	
None of the ingredients is listed.	
· TLV (Threshold Limit Value established by ACGIH)	
None of the ingredients is listed.	
· NIOSH-Ca (National Institute for Occupational Safety and Health)	
None of the ingredients is listed.	
GHS label elements Void	
· Hazard pictograms Void	
· Signal word Void	
· Hazard statements Void (Contd. on pa	nde 7)

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· Precautionary statements

Do not breathe mist/vapours/spray.

Wear protective gloves/protective clothing/eye protection/face protection.

If swallowed: Call a doctor if you feel unwell.

If on skin: Wash with plenty of soap and water. IF INHALED: Call a doctor if you feel unwell.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Dispose of contents/container in accordance with local/regional/national/international regulations.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.