



# **SAN High Quality 2.0**

For Bioprocessing

[www.arcticzymes.com](http://www.arcticzymes.com)

# SAN High Quality 2.0

## For Bioprocessing

**S**AN High Quality 2.0 is the second generation of our SAN High Quality enzyme. SAN HQ 2.0 offers wider compatibility with downstream purification processes while exhibiting the same salt tolerance and other biochemical characteristics as SAN HQ.

### Compatible with a wide range of workflows

SAN HQ 2.0 has well-defined behaviour in affinity and ion exchange chromatography, making it a good choice for purification of tagged recombinant proteins, manufacturing of nucleic acid-free molecular enzymes and reagents, as well as bioprocessing of vaccines, viruses and antibodies.



Superior activity at high salt conditions



High purity  
(≥ 99%)



Active at low temperatures



Easy removal

## Application: Isolation of affinity-tagged proteins

SAN HQ 2.0 is ideal for viscosity reduction and nucleic acid removal when purifying affinity-tagged recombinant proteins.

In this example, SAN HQ 2.0 in a typical *E. coli* lysis buffer was applied to a Ni Sepharose™ column. SAN HQ 2.0 was readily eluted during washing, demonstrating facile separation from his-tagged target protein

Resin	Resin type	pH	Sample and equilibration buffer	SAN HQ 2.0
Ni Sepharose™ Fast Flow	IMAC	8.5 (25°C)	Sample: 50 mM Tris-HCl, 500 mM NaCl, 5 mM MgCl <sub>2</sub> , 10 mM imidazole, 5% glycerol, 0.1% Triton™ X-100	Not bound
		7.5 (25°C)	Equilibration/washing: 20 mM Tris-HCl, 500 mM NaCl, 5 mM MgCl <sub>2</sub> , 20 mM imidazole	



## Properties

<b>Source</b>	Recombinantly produced in <i>Pichia pastoris</i>	<b>Specificity</b>	Nonspecific endonuclease cleaving single and double stranded DNA and RNA.
<b>Molecular weight</b>	The protein is glycosylated. Protein size without glycosylation is 26 kDa.	<b>Working ranges</b>	<ul style="list-style-type: none"> <li>Temperature: 5 – 40°C, optimal: ~35°C</li> <li>Salt concentration (NaCl / KCl): 150 – 900 mM, optimal: 400 – 650 mM</li> <li>Mg<sup>2+</sup>: &gt;1 mM is required for activity, optimal: 5 – 50 mM</li> <li>pH: 7.3 – 10.0, optimal: 8.2 – 9.2</li> </ul> Note: The working range is defined as ~20% of activity and optimal range is ~80% of activity
<b>Protein purity</b>	≥ 99% by SDS-PAGE analysis	<b>Tolerance to typical buffer additive</b>	Triton X-100: No reduction in activity (tested up to 15%)
<b>Isoelectric point</b>	9.55		
<b>Unit definition</b>	One unit is defined as the amount of enzyme that causes a ΔA <sub>260</sub> = 1.0 in 30 minutes at 37°C in 25 mM Tris-HCl pH 8.5 (@25°C), 5 mM MgCl <sub>2</sub> , 500 mM NaCl, and 50 µg/ml calf thymus DNA.		

## No license required

At ArcticZymes, we pride ourselves on always offering seamless accessibility to our high-quality products. Produced under ISO 13485, our enzymes are sold under a “no license required” policy to ensure that our

customers are not restricted by legal burdens, now or with their future use. In addition, we offer our nucleases in a flexible format and are readily available to discuss your custom needs.

	Article no.	Pack size	Concentration
<b>SAN HQ 2.0</b>	70940-202	25 kU	25 – 30 U/μl
	70940-150	500 kU	≥250 U/μl
	70940-160	5 MU	≥250 U/μl
	70940-100	Custom	Custom



# Your OEM Partner to deliver novel solutions for genomics and proteomics

## Quality

Our bioprocessing grade nucleases are manufactured according to requirements in ISO 13485. In addition, relevant requirements from cGMP have been implemented. The nucleases are manufactured using only non-animal origin raw materials to minimize the risk of contamination with adventitious agents. The final product is sterile filtered (0.22  $\mu\text{m}$ ), and release tests include both bioburden (TYMC/TAMC) and endotoxin assays according to USP-harmonised European Pharmacopeia methods.

By being the original manufacturer of SAN HQ 2.0 we offer full traceability of the supply chain and manufacturing process. We also assist our clients in implementing necessary identity and quality assays in-house.

We believe by this approach ArcticZymes Technologies offers an attractive balance between quality and cost for their customers.

## Additional information

For more information, please check our website [www.arcticzymes.com](http://www.arcticzymes.com).





## Cutting-edge enzymes from Norway

ArcticZymes Technologies has a long history dating back to the late 1980s. Based in Tromsø, Northern Norway, we use access to the marine Arctic to identify new cold-adapted enzymes for use in molecular research, *in vitro* diagnostics and therapeutics. We focus on strong and reliable relationships with our business partners and commercial innovators around the world. Therefore, we are constantly striving to work at the highest level and not only meet but exceed the expectations of our partners.

### In the service of science

The knowledge of the important role our enzymes play in research, diagnostics and therapeutics drives us every day. Our team of highly motivated and experienced scientists is constantly developing further innovations in order to expand our portfolio of novel and high-quality solutions.



## A partner you can trust



### Security of supply

With us you are always on the safe side when it comes to the timely delivery of high-quality enzymes. We strive for a reliable and uninterrupted supply of whatever enzyme technology you need.



### Partnership approach

Our focus is on cooperative B2B partnerships which means that we put our customers' needs at the center of what we do. We strive to provide innovative solutions in order to help them to succeed in whatever they do.



### Unique enzyme features

Enzymes play a decisive role in molecular research, *in vitro* diagnostics and therapeutics. This makes it all the more important that they have a consistently high quality. Our novel enzymes are reproducible and have unique properties that make them particularly robust.



### Unique access

Direct access to unique and diverse resources for bioprospecting allows us to continuously develop novel enzyme technologies with unique features and make them available to our partners.

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