

Faster time-to-results with the MicroSEQ ID Purification Combo Kit v2.0

Introduction

The improved Applied Biosystems™ MicroSEQ™ ID Purification Combo Kit v2.0 includes the ExoSAP-IT™ *Express* reagent and MicroSEQ™ ID Ultra Sequencing Clean-Up kit in plate format (Cat. No. A35852) or 8-strip format (Cat. No. A35854). These reagents provide thorough and convenient post-PCR and post-sequencing clean-up. The use of ExoSAP-IT *Express* reagent reduces post-PCR clean-up time from 30 minutes to 5 minutes and produces results equivalent to those of ExoSAP-IT reagent.

ExoSAP-IT *Express* reagent removes unincorporated dNTPs and primers remaining in the post-amplification PCR mix, in 5 minutes. The MicroSEQ ID Ultra Sequencing Clean-Up kit provides a convenient and simple way to remove dye terminators, dNTPs, and salts, as well as residual primers from cycle sequencing reactions. The end products can then be directly used for sequencing on any Applied Biosystems™ genetic analyzer.



Equivalent results with reduced processing time

A study was conducted to compare the performance of the ExoSAP-IT and ExoSAP-IT *Express* reagents coupled with the MicroSEQ ID Ultra Sequencing Clean-Up kit in the microbial identification workflow. Eight replicates of different bacterial species were sequenced with both the Applied Biosystems™ MicroSEQ™ 500 bp and full-gene kits, each with ExoSAP-IT and ExoSAP-IT *Express* reagents. Additionally, 8 replicates of different fungal or yeast species were sequenced using an Applied Biosystems™ MicroSEQ™ fungal identification kit using ExoSAP-IT and ExoSAP-IT *Express* reagents.



Table 1 shows equivalent results for ExoSAP-IT reagent and the improved ExoSAP-IT *Express* reagent. Results are based on the specified acceptance criteria for specimen score, percent match, and consensus sequence length.

Table 1. Comparison of identification results using ExoSAP-IT and ExoSAP-IT *Express* reagents.

Enzyme	Bacterial species, 500 bp sequencing	Number of test samples	Number of samples with specimen score ≥ 40	Number of samples with percent match $\geq 99.80\%$	Number of samples with consensus length ≥ 476
ExoSAP-IT reagent	<i>Staphylococcus epidermidis</i>	8	8	8	8
	<i>Bacillus subtilis spizizenii</i>	8	8	8	8
	<i>Streptococcus mitis</i>	8	8	8	8
ExoSAP-IT <i>Express</i> reagent	<i>Staphylococcus epidermidis</i>	8	8	8	8
	<i>Bacillus subtilis spizizenii</i>	8	8	8	8
	<i>Streptococcus mitis</i>	8	8	8	8
Enzyme	Bacterial species, full-gene sequencing	Number of test samples	Number of samples with specimen score ≥ 40	Number of samples with percent match $\geq 99.80\%$	Number of samples with consensus length $\geq 1,400$
ExoSAP-IT reagent	<i>Staphylococcus epidermidis</i>	8	8	8	8
	<i>Bacillus subtilis spizizenii</i>	8	8	8	8
	<i>Streptococcus mitis</i>	8	8	8	8
ExoSAP-IT <i>Express</i> reagent	<i>Staphylococcus epidermidis</i>	8	8	8	8
	<i>Bacillus subtilis spizizenii</i>	8	8	8	8
	<i>Streptococcus mitis</i>	8	8	8	8
Enzyme	Fungal species	Number of test samples	Number of samples with specimen score ≥ 40	Number of samples with percent match $\geq 99.80\%$	Number of samples with consensus length ≥ 276
ExoSAP-IT reagent	<i>Penicillium chrysogenum</i>	8	8	8	8
	<i>Aspergillus niger</i>	8	8	8	8
	<i>Candida albicans</i>	8	8	8	8
ExoSAP-IT <i>Express</i> reagent	<i>Penicillium chrysogenum</i>	8	8	8	8
	<i>Aspergillus niger</i>	8	8	8	8
	<i>Candida albicans</i>	8	8	8	8

Conclusions

Samples treated with the ExoSAP-IT and ExoSAP-IT *Express* reagents produced very similar sequencing results, and the correct identification results. The use of ExoSAP-IT *Express* reagent in the MicroSEQ ID Purification Combo Kit v2.0 reduces the post-PCR purification time from 30 minutes to 5 minutes and shortens time-to-results.

Ordering information

Product	Contents	Quantity	Cat. No.
MicroSEQ ID Purification Combo Kit v2.0, Plates	ExoSAP-IT <i>Express</i> reagent MicroSEQ ID Ultra Sequencing Clean-Up Plate	100 reactions One 96-well plate (96 rxns)	A35852
MicroSEQ ID Purification Combo Kit v2.0, 8-Well Strips	ExoSAP-IT <i>Express</i> reagent MicroSEQ ID Ultra Sequencing Clean-Up 8-Well Strips	100 reactions 12 x 8-well strips (96 rxns)	A35854

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