

**“Defend your DNA/RNA using  
our sample preservation buffers!,,**

Engineered for excellence, our product ensures  
results beyond the ordinary.

DNA/RNA  
Defend™



**InActiv Blue®**  
DNA/RNA Defend™ with  
blue dye as pipetting aid

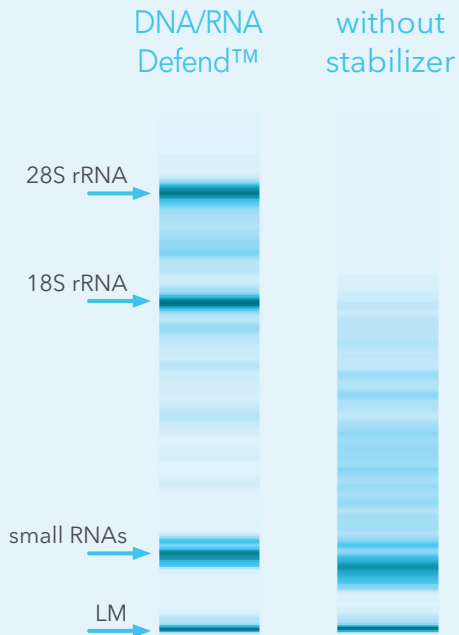
# DNA/RNA Defend™

## Protection from freeze-thaw damage

DNA/RNA Defend™ is not only suitable for sample transport, but also for the long-term storage of biological samples. DNA/RNA Defend™ protects DNA/RNA from multiple freeze-thaw cycles, even in the most complex samples (e.g. whole blood, saliva).

## RNA protection at room temperature

DNA/RNA Defend™ protects RNA when keeping biomaterials stored at room temperature, even for the most complex sample types such as whole blood and saliva.

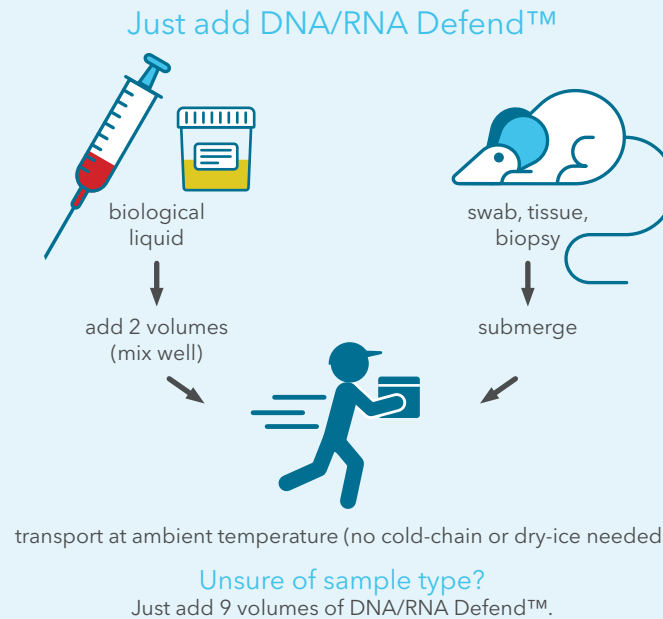


FragmentAnalyzer electropherogram of total RNA purified from whole blood stabilized for 24 hrs at room temperature with DNA/RNA Defend™ (left) or without stabilizer (right). DNA/RNA Defend™ clearly protects the RNA from degradation as evidenced from intact ribosomal RNA bands.

## Our buffer collection

	DNA/RNA Defend™	DNA Defend™	DNA/RNA Defend Pro™
inactivation of pathogens	✓	✓	✓
stabilizes RNA	✓	✓	✓
stabilizes DNA	✓	✓	✓
stabilizes antigen	✓	✓	✓
direct PCR compatible	✓	✓	✓
lysis buffer	✓	✓	✓
mucoytic applications	✓	✓	✓
applications	swab, blood, saliva, tissue, pathogens, feed, food, single cells		

## Instructions



## Suggested volumes

DNA/RNA Defend™	1 mL
cell pellets	3 million cells
tissue & environmental samples	100 mg
biological liquids	0.5 mL
swab	enough reagent to submerge swab tip

For larger amounts of samples, scale ratios proportionally.

## Pathogen inactivation

Non-exhaustive list of inactivated pathogens

bacteria		
B. subtilis	E. faecalis	E. coli*
L. fermentum	L. monocytogenes	M. tuberculosis
M. smegmatis*	P. aeruginosa*	S. enterica
S. aureus*	S. pneumoniae*	X. fastidiosa
viruses		
mpox*	SARS-CoV-2*	parvovirus
Carnivore protoparvovirus 1*	norovirus*	vaccinia*
bovine RSV*	chikungunya virus	dengue virus
ebolavirus	herpes simplex virus-1/2	influenza H5N1*
rhinovirus	MERS-coronavirus	MERS-coronavirus
yeast & eukaryotes		
C. albicans*	C. neoformans	S. cerevisiae
P. malariae		

\*Internally tested. All other organisms based on literature. Working with organism not listed? Contact us for product samples to evaluate.

## Problem solving

### A white precipitate occurred in DNA/RNA Defend™ & InActiv Blue® (with or without sample).

Components of the reagent (or sample) may have precipitated out of solution during storage. Vortex the sample to bring precipitate back into solution. Furthermore, try heating samples for 5 minutes at 37 °C and vortex.

### What downstream applications are compatible with the DNA/RNA Defend™ & InActiv Blue®?

DNA & RNA stored in the reagent is intended for nucleic acid-based applications such as massively parallel sequencing, qPCR, microarray, etc. Other applications such as proteomics and metabolomics have not been validated.

### Do I remove the DNA/RNA Defend™ & InActiv Blue® reagent when processing samples?

DNA/RNA Defend™ is a lytic reagent and nucleic acids from collected samples can be released in suspension. We recommend processing both solid (if any) and liquid components of a sample.

### How do I dispose of samples collected in DNA/RNA Defend™ & InActiv Blue®?

Sample disposal is dependent on the biological sample collected in the reagent. Dispose of contents/container in accordance with local/regional/national/international regulations.