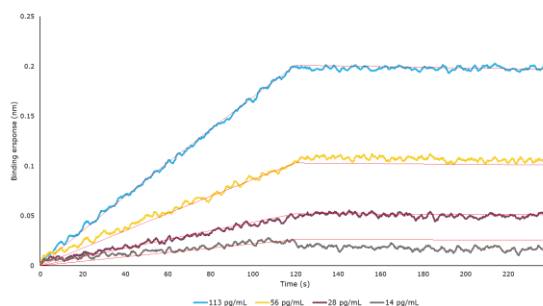


Optimer[®] binder for genetically detoxified Pertussis toxin

Validated Optimer binders for the detection and purification of gdPT

Species reactivity	Bacterial
Target	Genetically detoxified Pertussis Toxin (gdPT)
Target affinity	23 nM
Applications	Biolayer interferometry, affinity chromatography
Optimer [®] size	37 nucleotides

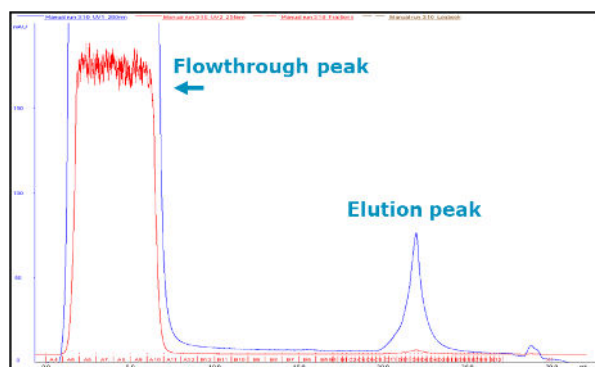


CD4 Optimer[®] shows high target affinity for the recombinant human protein by biolayer interferometry.

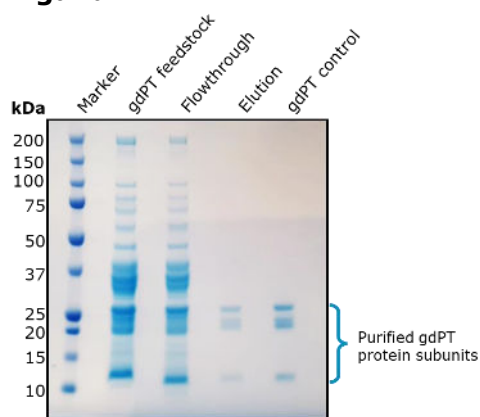
Target information

Pertussis, also known as whooping cough, is a highly contagious acute bacterial infection of the respiratory tract caused primarily by the bacterium *Bordetella pertussis*. The mutant gdPT is a genetically detoxified variant of the Pertussis toxin, carrying two single amino acid changes, R9K and E129G. Vaccines based on gdPT rather than chemically inactivated toxin show increased immunogenicity, higher levels of toxin-neutralizing antibodies and longer-lasting immune responses, thus gdPT represents an attractive candidate for the development of pertussis vaccines.

gdPT Optimer[®] functions as an affinity purification ligand



Purification of gdPT from feedstock was demonstrated on small-scale Optimer[®] columns using an AKTA Explorer FPLC.



gdPT Optimer[®] was immobilised on a commercially available chromatography resin and used to purify the heterodimeric protein from a feedstock sample.

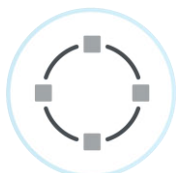
Optimer® binders

Optimer® binders are small oligonucleotide ligands (~15kDa) that bind to target molecules with comparable specificity and affinity to that of antibodies. These synthetic affinity ligands are designed to mimic the molecular recognition characteristics of monoclonal antibodies in different applications.

Intended for research use only. Not to be used for any other purpose, which includes but is not limited to, unauthorized commercial uses, *in vitro* diagnostic uses, *ex vivo* or *in vivo* therapeutic uses or any type of consumption or application to humans or animals.

The Optimer® advantage

Optimer® binders are synthetic oligonucleotide affinity ligands that offer several key benefits over traditional protein-based affinity reagents.



Batch consistent
manufacture



High affinity
& selectivity



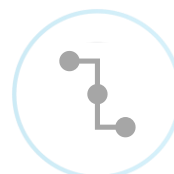
Animal-free discovery,
development & manufacture



Highly stable across
pH and solvents



Security of supply
from defined
Optimer® sequence



Diverse chemistries for
resin compatibility

Flexible functionalisation for assay compatibility

Optimer® binders can be modified with a wide variety of functional groups for simple platform integration. Please enquire for more information.

For custom modifications specific for your research, or more details about how Optimer® binders can be utilized in your research, please get in touch via email at info@aptamergroup.com.

