

Is there DNA in mRNA vaccines?



The mRNA in Comirnaty and Spikevax is manufactured using **plasmid DNA**.

Plasmids occur naturally in bacterial cells. They are used as a template to produce the mRNA of the vaccines.

Once the mRNA is produced, the manufacturing process includes steps to **break down and remove the plasmid DNA** as it is no longer needed.

The plasmid DNA is not intended to be part of the final mRNA vaccines. However, very small amounts of DNA fragments may remain. EMA has seen no evidence linking the residual DNA to **side effects**.

EMA has set limits for the level of broken-down DNA in mRNA vaccines. The manufacturing process is carefully designed and controlled to ensure **safe and acceptable levels**, and the vaccines' quality is routinely checked.