

mRNA-CD3 (εγδζ)

mRNA-CD3(εγδζ) is a ready-to-use mRNA product encoding CD3 (CD3ε& CD3γ& CD3δ& CD3ζ). The CD3 complex is a key component of T cell receptor (TCR) signal transduction, consisting of four distinct subunits: CD3ε (epsilon), CD3γ (gamma), CD3δ (delta), and CD3ζ (zeta). Together, they form the TCR-CD3 signaling complex, which plays a critical role in T cell activation and immune response. The mRNA-CD3 (εγδζ) is an in vitro-transcribed mRNA combination comprising four separate chains, each encoding one CD3 subunit. This combination is designed for applications such as immune cell reprogramming (e.g., CAR-T, TCR-T) or in vitro T cell function studies, offering advantages of high expression efficiency and stable translation.

CD3ε: Forms heterodimers with CD3γ or CD3δ and participates in TCR membrane expression and initial signal transduction.

CD3γ: Structurally similar to CD3δ, it pairs with CD3ε and contributes to the conformational stability of the TCR-CD3 complex.

CD3δ: Functionally complements CD3γ, regulating TCR assembly and signal throughput.

CD3ζ: Exists as a homodimer within the TCR complex, rich in

Immunoreceptor Tyrosine-based Activation Motifs (ITAMs), and serves as a central driver of downstream signaling cascades.

Name	Cat.No	Scale	State
mRNA-CD3 (εγδζ)	HX-mRNA111	1mg	Lyophilized/Liquid

Concentration: 1mg/mL

Storage Buffer: ddH₂O pH=7.0

mRNA length: 2652 nt

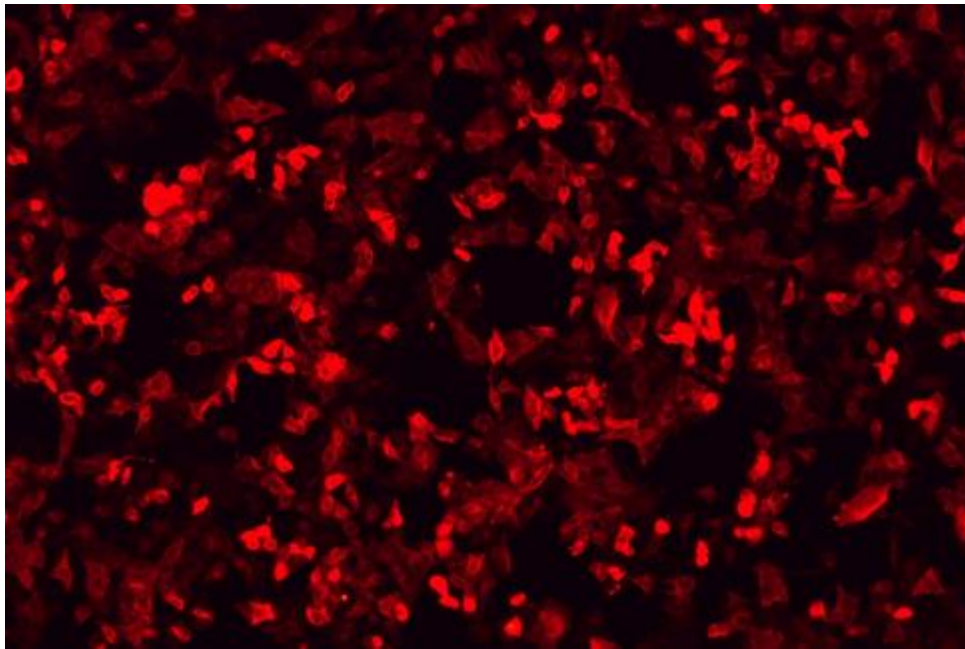
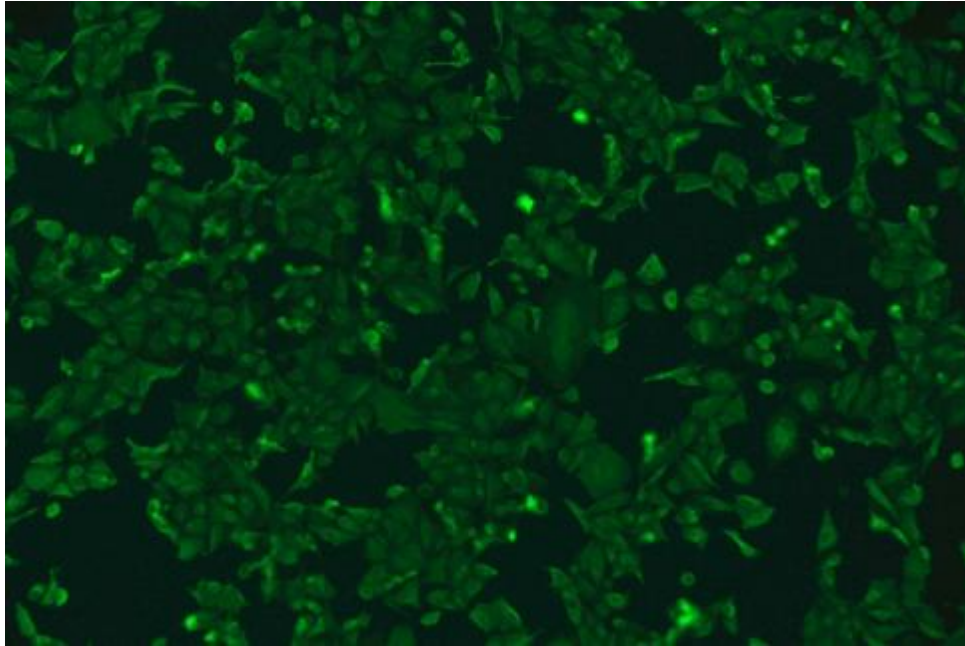
Amino acid sequence size: 784 kDa

Handling and Storage: store at – 80°C for long term

Cell Expression result:

Cell Line: A549 Culture Plate: 96-well plate Cell Conluency: 80%

Transfection Dose: 200 ng per well



Amino acid sequence:

MQSGTHWRVLGLCLLSVGVWGQDNEEMGGITQTPYKVSISGTTVILTCPQYPGSEI
LWQHNDKNIGGDEDDKNIGSDEDHLSLKEFSELEQSGYYVCYPRGSKPEDANFYLYL
RARVCENCMEMDVMSVATIVIVDICITGGLLLLVIYYWSKNRKAKAKPVTRGAGAGGR
QRGQNKERPPVPNPDYEPPIRKGQRDLYSGLNQRRIGATNFSLLKQAGDVEENPGP
MEQGKGLAVLILAILLQGTLAQSIKGNHLVKVYDYQEDGSVLLTCDAEAKNITWFKD

GKMIGFLTEDKKKWNLGSNAKDPRGMYQCKG SQNKSKPLQVYYRMCQNCIELNAA
TISGFLFAEIVSIFVLAVGVYFIAGQDGVRQSRASDKQTLLPNDQLYQPLKDREDDQY
SHLQGNQLRRNGEGRGSLLTCGDVEENPGPMEHSTFLSGLVLATLLSQVSPFKIPIEE
LEDRVFVNCNTSITWVEGTVGTLLSDITRLDLGKRILDPRGIYRCNGTDIYKDKESTV
QVHYRMCQSCVELDPATVAGIIVTDVIATLLLALGVFCFAGHETGRLSGAADTQALLR
NDQVYQPLRDRDDAQYSHLGGNWARNKGQCTNYALLKLAGDVESNPGPMKWKAL
FTAAILQAQLPITEAQSFGLLDPKLCYLLDGILFIYGVILTALFLRVKFSRSADAPAYQQG
QNQLYNELNLGRREEYDVLKRRGRDPEMGGKPQRRKNPQEGLYNELQKDKMAEA
YSEIGMKGERRRGKGGHDGLYQGLSTATKDTYDALHMQALPPR