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Product Information

FLAG®-tag Genes human

Catalog Numbers: **FTG100 to FTG249**
Storage Temperature: –70°C

Product Description

3xFLAG™-tagged genes are cloned human genes that have been modified to express 3X FLAG epitope-tagged fusion proteins. Each clone contains the entire gene of interest, including all exons and introns, plus thousands of base pairs upstream and downstream of the transcription unit. The tagged genes generally retain their full regulatory potential. This is in contrast to commonly used cDNA clones that completely lack native regulatory elements. Tagged genes are provided in fosmid vectors, each of which carries ~40 kb of genomic DNA. C-terminal tags are inserted at the 3'-end of the coding sequence of the gene of interest. Tagged genes may be delivered to cells using standard transfection protocols. Transfection frequencies generally range between 2% and 10%. Stable transfectants may be isolated by G418 selection for those clones that carry a neomycin resistance gene in the vector backbone.

The 3xFLAG system is an improvement upon the original system by fusing 3 tandem FLAG epitopes (22 amino acids). Detection of fusion proteins containing 3xFLAG is enhanced up to 200 times more than other systems. Like the original FLAG tag, 3xFLAG is hydrophilic, contains an EK cleavage site, and is relatively small. Therefore, the risk of altering protein function, blocking other epitopes or decreasing solubility is minimized.

Components

The individual clones are provided as a frozen fosmid glycerol stock containing Luria Broth (LB), and 20% glycerol.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

DNA preparation: Fosmid clones are supplied in Escherichia coli DH5α cells. Transfection-quality DNA can be prepared from these cells using kits that are available from a variety of sources.

Transfection: Transfection of mammalian cells may be performed using standard transfection reagents following protocols provided by the supplier. Successful transfections have been performed with standard reagents using 1-2 µg of DNA per 100,000 cells. Transfection efficiencies vary depending on the recipient cell type.

DNA preparation resources: Visit www.sigma.com/nap (http://www.sigmaaldrich.com/life-science/molecular-biology/dna-and-rna-purification.html)

Storage/Stability: –70°C ; Repeated freeze thaw cycles are to be avoided

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