STRUCTURAL PROTEINS

Ref. 30621
Ref. 30622

NUCLEAR LOCALIZATION SIGNAL (NLS)

Nuclear transport is a highly regulated mechanism that needs specific controls to decide when a protein enters or leaves the nucleus.

The translocation of material between the cytoplasm and the nucleus is directed by a series of proteins responsible for nuclear transport.

Importin protein family is in charge of the protein translocation from the cytoplasm to the nucleus guided by NLS signals.

Nuclear localization signals (NLS) are short peptide sequences within the amino acid sequence of nuclear cargo proteins.

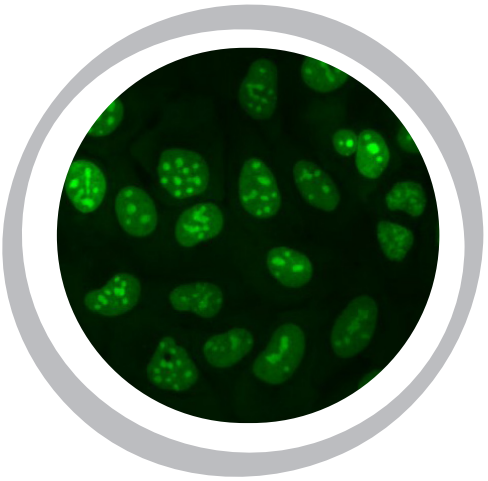
Commonly, the NLS sequences contain a high proportion of lysine (K) or arginine (R) aminoacids and are very similar to the first found NLS sequence in the simian virus SV40 (PKKKRKV).

Innoprot

In the therapeutic area, nuclear targeting via NLS tagging is widely used in cancer therapy and it is helping to improve the DNA vaccines delivery into the cell nucleus.

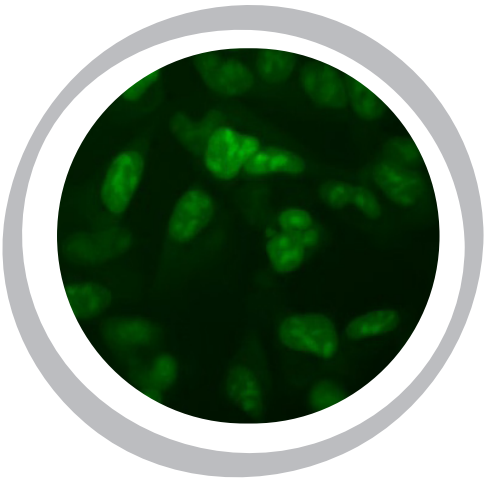
U2OS and HEK293 stable cell lines were transfected with the green fluorescent protein turboGFP tagged in the N-terminal with a nuclear localization signal (NLS).

Innoprot´s NLS-tGFP cell lines have been designed to study the translocation processes between the nucleus and the cytoplasm.



U2OS NLS-tGFP

HEK 293 NLS-tGFP



Product Name: NLS-tGFP cell line
U2OS reference: P30621
HEK 293 reference: P30622
Prot. Official Full Name: Nuclear localization signal
NLS Sequence: PKKKRKKVR
Host Cell: U2OS / HEK 293
Resistance: Puromycin
Quantity: > 3 x 10^6 cells / vial
Storage: Liquid Nitrogen