Cell Biology Laboratory

**Nuclear transport Worksheet**

**NUCLEAR TRANSPORT**

1. **Write the first six amino acids of your assigned NLS protein (or copy/paste entire sequence here). Note: I use this information to match your protein to the right key.**
2. **Answer the following questions about the first NLS search results page (cut off 4, entire region). If none were found, type in “0”.**

|  |  |
| --- | --- |
| **How many Predicted Monopartite NLS were found?** |  |
| **How many Predicted Bipartite NLS were found?** |  |
| **What is the position of the predicted NLS farthest away from the start of the query sequence (largest pos #)?** |  |

1. *Use however many lines you need in the table below to* **record the results of the more stringent NLS search results page (cut off 7, within terminal). Write whether the sequence is monopartite or bipartite by writing mono- or bi-, write the position, the sequence and score of each of the NLS. *If no result was listed, write ‘none’.***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Mono- or Bi-** | **Pos** | **Sequence** | **Score** |
| **#1** |  |  |  |  |
| **#2** |  |  |  |  |
| **#3** |  |  |  |  |

1. **Use BLAST to determine the identity of your assigned protein and record the name of the first protein from the BLAST generated list (note: don’t forget “9606”)**
2. **Where in a cell should this protein be located?**
3. **Does your NLS data support or contradict the location of the protein?**
4. **Look closely at the amino acids in sequence #1 above. How does this NLS fit the criteria of a classical nuclear localization signal?**