Endoplasmic Reticulum: I understand that when there is a transmembrane protein made with its N-terminus on the cytoplasmic
side, there is no cleavage of the signal peptide. What about when there is a transmembrane protein made
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Normal
0

false
false
false

EN-US
X-NONE
X-NONE

MicrosoftInternetExplorer4

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/* Style Definitions */

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```
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mso-tstyle-colband-size:0;
mso-style-noshow:yes;
mso-style-priority:99;
mso-style-qformat:yes;
mso-style-parent:"";
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mso-para-margin-top:0in;
mso-para-margin-right:0in;
mso-para-margin-bottom:10.0pt;
mso-para-margin-left:0in;
line-height:115%;
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font-size:11.0pt;
font-family:"Calibri","sans-serif";
mso-ascii-font-family:Calibri;
mso-ascii-theme-font:minor-latin;
mso-fareast-font-family:"Times New Roman";
mso-fareast-theme-font:minor-fareast;
mso-hansi-font-family:Calibri;
mso-hansi-theme-font:minor-latin;
mso-bidi-font-family:"Times New Roman";
mso-bidi-theme-font:minor-bidi;}
```


You are correct. If a transmembrane protein has its N terminus
in the lumen of the ER, it has to display an amino-terminal signal peptide
which is cleaved by signal peptidase. Given how the protein is looped into the translocon
during translation, the only way for a protein to have its N terminus in the lumen
is for the signal peptide to be at the very N-terminus of the protein which
will be cleaved off.

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Unique solution ID: #2136
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Last update: 2011-03-09 17:19