

Define  $\left[ \mathbf{C}_i = \mathbb{E}_{\{\} \rightarrow \{i\}} \left[ \mathbf{0}, \mathbf{0}, \mathbf{B}_i^{1/2} e^{-\hbar \epsilon a_i / 2} \right]_{\$k} \right]$ ,

$\bar{\mathbf{C}}_i = \mathbb{E}_{\{\} \rightarrow \{i\}} \left[ \mathbf{0}, \mathbf{0}, \mathbf{B}_i^{-1/2} e^{\hbar \epsilon a_i / 2} \right]_{\$k}$ ,

$\mathbf{c}_i = \mathbb{E}_{\{\} \rightarrow \{i\}} \left[ \mathbf{0}, \mathbf{0}, \mathbf{B}_i^{1/4} e^{-\hbar \epsilon a_i / 4} \right]_{\$k}$ ,

$\bar{\mathbf{c}}_i = \mathbb{E}_{\{\} \rightarrow \{i\}} \left[ \mathbf{0}, \mathbf{0}, \mathbf{B}_i^{-1/4} e^{\hbar \epsilon a_i / 4} \right]_{\$k}$ ,

$\mathbf{Kink}_i = (\mathbf{R}_{1,3} \bar{\mathbf{C}}_2) // \mathbf{dm}_{1,2 \rightarrow 1} // \mathbf{dm}_{1,3 \rightarrow i}$ ,

$\overline{\mathbf{Kink}}_i = (\bar{\mathbf{R}}_{1,3} \mathbf{C}_2) // \mathbf{dm}_{1,2 \rightarrow 1} // \mathbf{dm}_{1,3 \rightarrow i}$ ,

$\rho_i = (\mathbf{c}_1 \bar{\mathbf{c}}_3 \mathbf{dS}_i) // \mathbf{dm}_{1,i \rightarrow i} // \mathbf{dm}_{i,3 \rightarrow i}$

(\* $\rho$  reverses a strand\*)