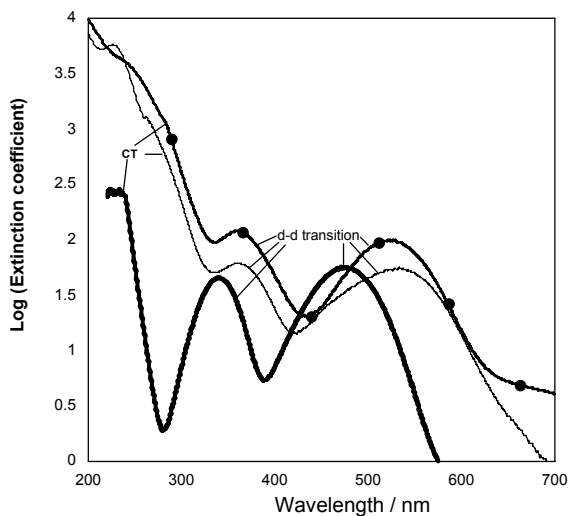


**Supplementary Material #1**



Suppl. # 1. A plot of Log(extinction coefficient) vs wavelength for  $[\text{Co}(\text{NH}_3)_6]^{3+}$ , (thick line), 10 mM.  $[\text{Co}(\text{NH}_3)_5\text{Cl}]^{2+}$  (thin line), 2 mM, and  $[\text{Co}(\text{NH}_3)_4\text{CO}_3]^+$ , (dotted line), 2 mM. All spectra were recorded at 25 °C, in a quartz cuvette of 1 cm pathlength, Tris buffer, pH 7 (CT = charge transfer band, d-d transitions = ligand field bands).

**Supplementary Material #2.**

**Table. Photocleavage yields of specific proteins by Co(III) Complexes**

| Protein              | Co(III) Complex                            | [Co(III)] mM | % Cleavage |
|----------------------|--|--------------|------------|
| Human apotransferrin | $[\text{Co}(\text{NH}_3)_5\text{Cl}]^{2+}$ | 1 mM         | 13 ± 3     |
| Bovine Serum Albumin | $[\text{Co}(\text{NH}_3)_5\text{PO}_4]$    | 2 mM         | 28         |
| Yeast Enolase        | $[\text{Co}(\text{NH}_3)_5\text{Cl}]^{2+}$ | 2 mM         | 35         |
| Yeast Enolase        | $[\text{Co}(\text{NH}_3)_6]^{3+}$          | 2 mM         | 7          |
| Yeast Enolase        | $[\text{Co}(\text{NH}_3)_5\text{CO}_3]^+$  | 2 mM         | 24         |