**BIOLOGICAL ACTIVITY**

**Description**
Tiaprost is a prostaglandin F$_{2\alpha}$ (PGF$_{2\alpha}$) analogue.

**IC$_{50}$ & Target**
PGF$_{2\alpha}$

**In Vivo**
Plasma progesterone levels decrease sharply within 12 hours after the initial treatment with Tiaprost and within 24 hours reach levels at about 3.18 nM (1 ng/mL). Over the following days, progesterone levels remain either slightly above (cows 1, 3, 5 and 6) or below (cow 2) 3.18 nM. In cow 4, levels remain for 17 days above 3.18 nM and drop below this level thereafter. At term, all cows show the lowest recorded progesterone levels (1 to 2 nM). Repeated luteolytic treatments with Tiaprost (cows 1 and 2) or estradiol benzoate (cow 3) has no further influence on individual progesterone levels. Treatment with progesterone-releasing intravaginal device (PRID) does not significantly elevate progesterone plasma levels. Total estrogens in plasma remained in general unchanged$^{[1]}$.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**PROTOCOL**

**Animal Administration**$^{[1]}$
Six healthy dairy cows of the German Black Pied breed, pregnant for 190 to 266 days, are treated initially with 0.75 mg of the PGF$_{2\alpha}$ analog Tiaprost SC (treatment day=day 0). All animals are moved to the department’s large animal hospital 5 to 20 days before treatment commenced; they are kept in stanchions and fed. All animals are examined clinically daily and rectally as well as vaginally at two- to six-day intervals$^{[1]}$.

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**REFERENCES**

Caution: Product has not been fully validated for medical applications. For research use only.

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