FORMULA 3.856.5

$$\int_0^\infty \frac{\cos(a^2x^2)\,dx}{\sqrt{\beta^4+x^4}\sqrt{(x^2+\sqrt{\beta^4+x^4})^3}} = \frac{\sinh\frac{a^2\beta^2}{2}}{2\sqrt{2}\beta^4} K_1\left(\frac{a^2\beta^2}{2}\right)$$