

## Supplementary material

**Table S1.** Detailed list of reference standards used, including compound name, WADA class, supplier, type, purity and the applied method for detection

Compound	WA DA class	Supplier	Reference material type	Purity (%)
1,4-androstadiene-3,17-dione	S1		solid	99.30
1-androstendione	S1		D&S	98.50
4(5)-androstene-3,17-dione	S1		solution	99.71
5 $\alpha$ -androst-1-en-17 $\beta$ -ol-3-one (1-testosterone)	S1		D&S	97.70
Androsterone	S1		solid	97.63
Boldenone	S1		solution	96.81
Calusterone	S1		D&S	100.00
Clostebol	S1		solid	99.51
Epitestosterone	S1		solution	99.66
Etiocholanolone	S1		solid	99.00
Fluoxymesterone	S1	LGC Standards GmbH (Wesel, Germany)	solid	97.20
Methenolone	S1		solution	99.69
Nandrolone	S1		solution	99.79
Norethandrolone	S1		solid	99.90
Oxandrolone	S1		solid	96.96
Oxymesterone	S1		solid	99.10
Stanozolol	S1		solution	98.38
Testosterone	S1		solution	96.42
Testosterone acetate	S1		solid	99.80
Testosterone propionate	S1		solution	100.06
Trenbolone	S1		solution	99.31
Trenbolone acetate	S1		solid	96.70
19-norandrosterone	S1		solid	99.10
3,5-androstadiene-7,17-dione (Arimistane)	S4		solid	98.00
4-androstene-3,6,17-trione	S1		solid	98.00
Anastrasole	S4		solid	98.00
Bolasterone	S1		solid	97.00
Exemestane	S4		solid	98.00
GW 501516	S4		solid	98.59
Methylclostebol	S1	Toronto Research Chemical (North York, ON, Canada)	solid	98.00
Methylstenbolone	S1		solid	97.00
Metribolone	S1		solid	98.00
Mibolone	S1		solid	98.00
Norbolethone	S1		solid	97.00
Norclostebol	S1		solid	98.00
Ostarine	S1		solid	98.00
RAD 140	S1		solid	98.00
Stenbolone	S1		solid	98.00
Tetrahydrogestrinone	S1		solid	94.67
9(10)-dehydronandrolone	S1	Tokyo Chemical Industry Co., Ltd (Tokyo, Japan)	solid	98.30
Gestrinone	S1		solid	100.50
$\Delta^{9(11)}$ -methyltestosterone	S1		solid	91.40
17 $\alpha$ -methyltestosterone	S1	Merck KGaA (Darmstadt, Germany)	solution	98.15
Methandienone	S1		solution	98.43
Testosterone-d3	ISTD		solution	98.80
LGD4033	S1	Cayman Chemical (Ann Arbor, MI, USA)	solid	99.60
Adrenosterone	S1	ChromaDex (Irvine, CA, US)	solid	100.00
$\beta$ -ecdysterone	S1 ML	European Pharmacopoeia (Strasbourg, France)	solid	84.80
Danazol	S1	U.S. Pharmacopeia (North Bethesda, MD, US)	solid	99.90

S1: anabolic agents, S4: hormones and metabolic modulators, ML: "monitoring list", ISTD: internal standard