## Product overview

**Name**
17 β-Estradiol  

**Cat No**
HB2494  

**Short description**
Estrogen receptor (ER) agonist  

**Biological description**
Estrogen receptor (ER) agonist (Ki values are 0.13 and 0.12 nM at ERα and ERβ respectively). Also shows activity at GPR30 receptors (Ki = 6 nM). Endogenous hormone. Shows neuroprotective and antioxidant effects.  

**Alternative names**
Estradiol|E2  

**Biological action**
Agonist  

**Purity**
>98%  

## Properties

**Chemical name**
(8R,9S,13S,14S,17S)-13-methyl-6,7,8,9,11,12,14,15,16,17-decahydrocyclopenta[a]phenanthrene-3,17-diol  

**Molecular Weight**
272.38  

**Chemical structure**

![Chemical structure](image)

**Molecular Formula**
C_{18}H_{24}O_{2}  

**CAS Number**
50-28-2  

**PubChem identifier**
5757  

**SMILES**
C[C@]12CC[C@H]3[C@H][C@@H]1CC[C@@H]2O)CCC4=C3C=CC(=C4)O  

**InChI**
InChI=1S/C18H24O2/c1-18-9-8-14-13-5-3-12(19)10-11(13)2-4-15(14)16(18)6-7-17(18)20/h3,5,10,14-17,19-20H,2,4,6-9H2  

**InChiKey**
VOXZDWPVJITMNNZBRFXRBCSA-N  

**MDL number**
MFCD00003693  

## Storing and Using Your Product

**Storage instructions**
Room temperature  

**Solubility overview**
Soluble in DMSO (100 mM) and in ethanol (75 mM)  

**Important**
This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

## References for 17 β-Estradiol
17-beta estradiol protects neurons from oxidative stress-induced cell death in vitro.

PubMedID: 7488136

Identity of an estrogen membrane receptor coupled to a G protein in human breast cancer cells.

PubMedID: 15539556

Comparison of the ligand binding specificity and transcript tissue distribution of estrogen receptors alpha and beta.

PubMedID: 9048584

The ins and outs of GPR30: a transmembrane estrogen receptor.

PubMedID: 18406603