Vasopressin, ATP and catecholamines differentially control potassium secretion in inner ear cell line.

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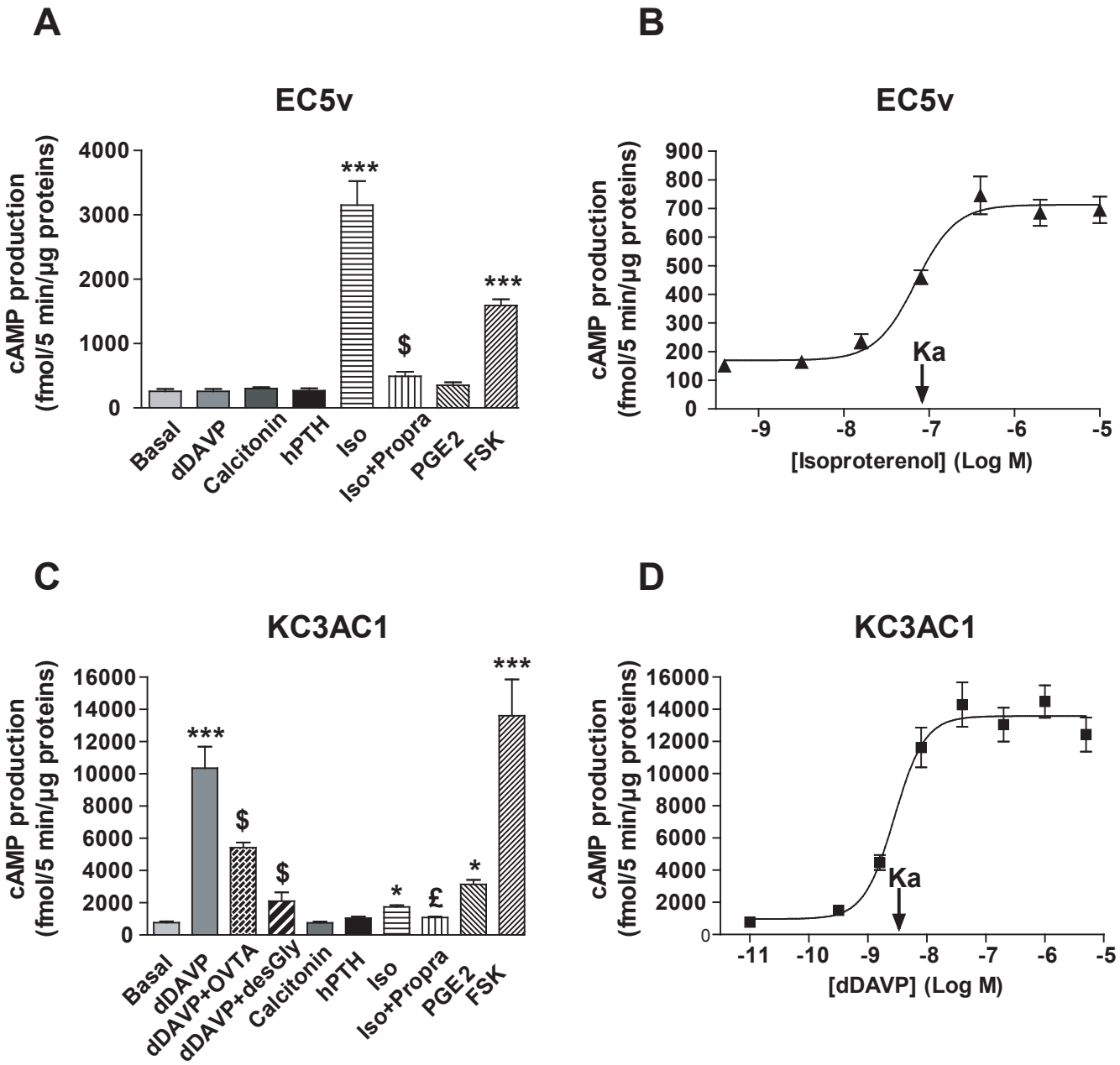
A
EC5v
cAMP production
(fmol/5 min/µg proteins)
4000
3000
2000
1000
0
***
$
***
Basal
dDAVP
Calcitonin
hPTH
Iso
Iso+Propra
PGE2
FSK
B
EC5v
cAMP production
(fmol/5 min/µg proteins)
900
800
700
600
500
400
300
200
100
0
Ka
-9
-8
-7
-6
-5
[Isoproterenol] (Log M)
C
KC3AC1
cAMP production
(fmol/5 min/µg proteins)
16000
14000
12000
10000
8000
6000
4000
2000
0
***
$
$
*
£
*
***
Basal
dDAVP
dDAVP+OVTA
dDAVP+desGly
Calcitonin
hPTH
Iso
Iso+Propra
PGE2
FSK
D
KC3AC1
cAMP production
(fmol/5 min/µg proteins)
16000
14000
12000
10000
8000
6000
4000
2000
0
Ka
-11
-10
-9
-8
-7
-6
-5
[dDAVP] (Log M)

Figure 1

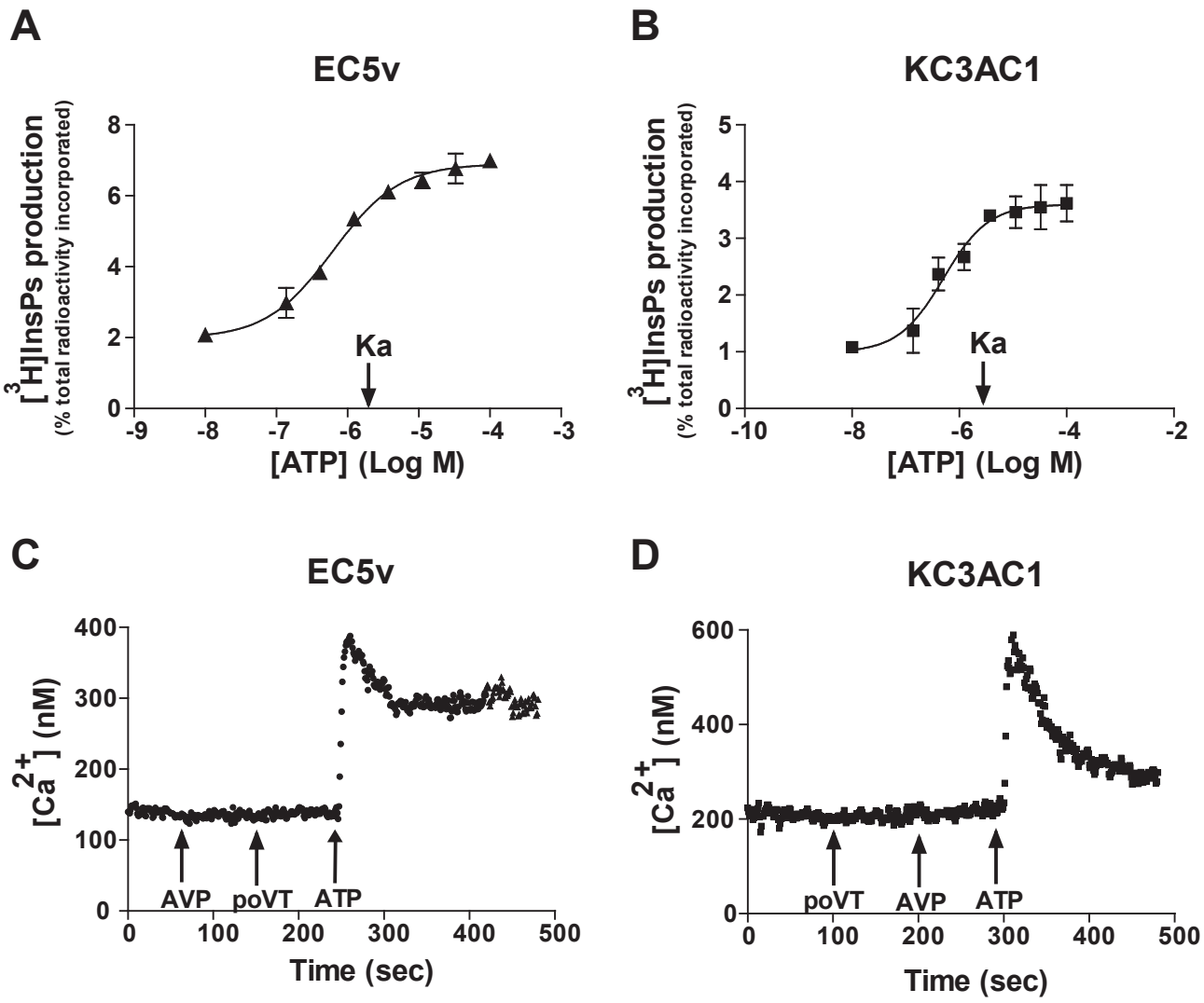
A
EC5v
[3H]InsPs production
(% total radioactivity incorporated)
Ka
[ATP] (Log M)
B
KC3AC1
[3H]InsPs production
(% total radioactivity incorporated)
Ka
[ATP] (Log M)
C
EC5v
[Ca2+] (nM)
AVP
poVT
ATP
Time (sec)
D
KC3AC1
[Ca2+] (nM)
poVT
AVP
ATP
Time (sec)

Figure 2

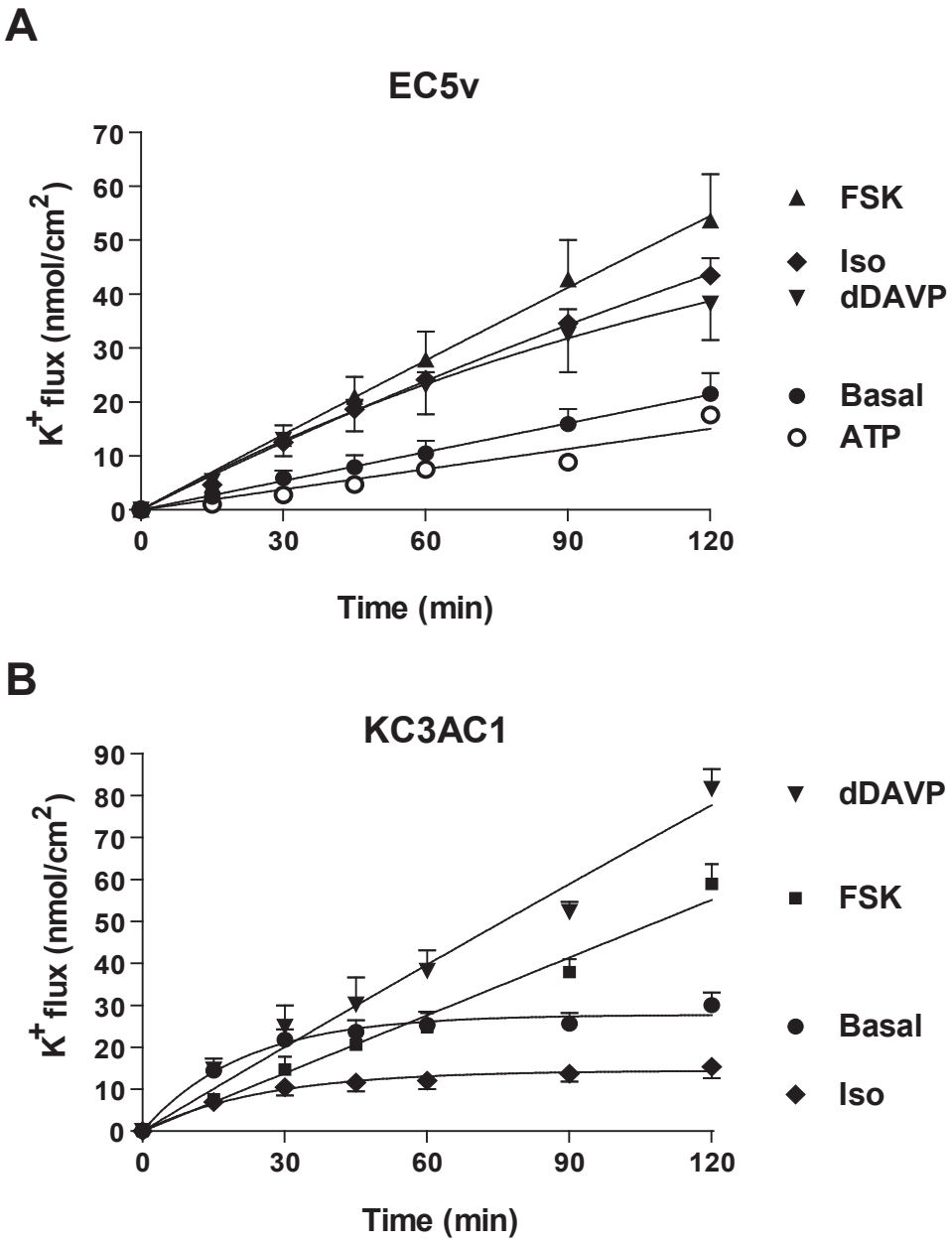
A
EC5v
70
60
50
40
30
20
10
0
K^+ flux (nmol/cm^2)
0
30
60
90
120
Time (min)
FSK
Iso
dDAVP
Basal
ATP
B
KC3AC1
90
80
70
60
50
40
30
20
10
0
K^+ flux (nmol/cm^2)
0
30
60
90
120
Time (min)
dDAVP
FSK
Basal
Iso

Figure 3