

PACDB, PACDZB

Pointer Authentication Code for Data address, using key B. This instruction computes and inserts a pointer authentication code for a data address, using a modifier and key B.

The address is in the general-purpose register that is specified by <Xd>. The modifier is:

- In the general-purpose register or stack pointer that is specified by <Xn|SP> for PACDB.
- The value zero, for PACDZB.

Integer

(FEAT_PAAuth)

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
1	1	0	1	1	0	1	0	1	1	0	0	0	0	1	0	0	Z	0	1	1	Rn					Rd					

PACDB (Z == 0)

PACDB <Xd>, <Xn|SP>

PACDZB (Z == 1 && Rn == 11111)

PACDZB <Xd>

```
boolean source_is_sp = FALSE;
integer d = UInt(Rd);
integer n = UInt(Rn);

if !IsFeatureImplemented(FEAT_PAAuth) then
    UNDEFINED;

if Z == '0' then // PACDB
    if n == 31 then source_is_sp = TRUE;
else // PACDZB
    if n != 31 then UNDEFINED;
```

Assembler Symbols

<Xd>	Is the 64-bit name of the general-purpose destination register, encoded in the "Rd" field.
<Xn SP>	Is the 64-bit name of the general-purpose source register or stack pointer, encoded in the "Rn" field.

Operation

```
if source_is_sp then
    X[d, 64] = AddPACDB(X[d, 64], SP[]);
else
    X[d, 64] = AddPACDB(X[d, 64], X[n, 64]);
```

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