

MOV (inverted wide immediate)

Move (inverted wide immediate) moves an inverted 16-bit immediate value to a register.

This is an alias of [MOVN](#). This means:

- The encodings in this description are named to match the encodings of [MOVN](#).
- The description of [MOVN](#) gives the operational pseudocode, any constrained unpredictable behavior, and any operational information for this instruction.

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
sf		0	0	1	0	0	1	0	1	hw		imm16														Rd					
opc																															

32-bit (sf == 0 && hw == 0x)

```
MOV <Wd>, #<imm>
```

is equivalent to

```
MOVN <Wd>, #<imm16>, LSL #<shift>
```

and is the preferred disassembly when

```
! (IsZero(imm16) && hw != '00') && ! IsOnes(imm16).
```

64-bit (sf == 1)

```
MOV <Xd>, #<imm>
```

is equivalent to

```
MOVN <Xd>, #<imm16>, LSL #<shift>
```

and is the preferred disassembly when

```
! (IsZero(imm16) && hw != '00').
```

Assembler Symbols

<Wd> Is the 32-bit name of the general-purpose destination register, encoded in the "Rd" field.

<Xd> Is the 64-bit name of the general-purpose destination register, encoded in the "Rd" field.

<imm>	<p>For the 32-bit variant: is a 32-bit immediate, the bitwise inverse of which can be encoded in "imm16:hw", but excluding 0xffff0000 and 0x0000ffff</p> <p>For the 64-bit variant: is a 64-bit immediate, the bitwise inverse of which can be encoded in "imm16:hw".</p>
<shift>	<p>For the 32-bit variant: is the amount by which to shift the immediate left, either 0 (the default) or 16, encoded in the "hw" field as <shift>/16.</p> <p>For the 64-bit variant: is the amount by which to shift the immediate left, either 0 (the default), 16, 32 or 48, encoded in the "hw" field as <shift>/16.</p>

Operation

The description of [MOVN](#) gives the operational pseudocode for this instruction.

Operational information

If PSTATE.DIT is 1:

- The execution time of this instruction is independent of:
 - The values of the data supplied in any of its registers.
 - The values of the NZCV flags.
- The response of this instruction to asynchronous exceptions does not vary based on:
 - The values of the data supplied in any of its registers.
 - The values of the NZCV flags.

[Base Instructions](#)

[SIMD&FP Instructions](#)

[SVE Instructions](#)

[SME Instructions](#)

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Internal version only: isa v33.64, AdvSIMD v29.12, pseudocode no_diffs_2023_09_RC2, sve v2023-06_rel ; Build timestamp: 2023-09-18T17:56

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